

# Trends in Value-Added Agriculture

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Corn Marketing Program of Michigan

MSPC Michigan Soybean Promotion Committee



MICHIGAN FARM BUREAU



From the President

As producers, we learned long ago there are two obvious ways to increase our bottom lines — reduce costs per unit of production or increase the price we receive for our product. Controlling our input costs has challenged all of us to manage every aspect of our operation carefully to increase profitability.

But what do you do if you've done all that you can to control your farm's input cost? Finding or expanding a new market for your commodity is the other way to add value to the commodities that we produce — whether it's milk, corn, soybeans, cherries or any other commodity grown in Michigan.

While the term "value-added agriculture" may at first glance seem intimidating, it's really nothing new. The livestock industry, for example, has applied the value-added concept for years, simply by taking common commodities such as corn, soybeans and forages and using them to produce milk and meat products. The fruit and vegetable industry utilizes value-added processing as well as direct marketing to improve grower returns. Thanks to new technology and new products, we now have opportunities to explore and implement the value-added concept in other ways and improve the value of your commodity beyond the farm gate.

What you hold in your hands is a guide to making you, as a producer in Michigan's vast agricultural landscape, more profitable. Together Michigan Farm Bureau, the Corn Marketing Program of Michigan and the Michigan Soybean Promotion Committee have teamed up to provide you with an in-depth explanation of the trends in value-added agriculture and what it takes to get started.

You'll also find some examples of new products geared toward the value-added market and examples of how other farmers across the country have teamed up and pooled their resources to improve their bottom line.

The added-value cooperative is an exciting concept that allows farmers to become more vertically integrated and realize a bigger return on their farm investment.

I believe now is the time to aggressively pursue the new-wave cooperative concept in Michigan. Our ongoing efforts to revitalize the state's livestock industry with a \$70 million investment at our land grant university has poised our state for tremendous growth in the livestock sector.

We are equally committed to the cropping sector as well, through Project GREEN which has a strong food processing component. Our state's microclimates, diverse commodity base and close proximity to markets create incredible opportunities for a wide range of value-added processing operations that aren't typically available to producers in most states.

I urge you to use this information to your advantage. Farm Bureau also has resources, such as our Public Affairs Division and our Commodity and Environmental Division, poised to provide you information on legislative, regulatory and economic issues.

Most importantly, I urge you to view the Michigan Farm Bureau and your county Farm Bureau as a catalyst that can provide you with the networking so often necessary to take these ideas from the concept stage to reality. ■

Sincerely,

Jack Laurie  
Jack Laurie, President  
Michigan Farm Bureau



## Trends in U.S. agriculture

Events of the last several years have set the course for the future of agriculture into the next century.

### Expanding International Trade

One of the defining moments for the future of agriculture was the completion of the Uruguay Round of international trade negotiations including the provisions covering agricultural trade policy. The General Agreement on Tariffs and Trade (GATT) put agriculture on a path toward more open trade policies with the goal of expanding global economic activity. The agreement sets in motion a mechanism and phase out trade-distorting domestic policies and export subsidies with the goal of creating a more level playing field for agricultural trade between member countries.

The other major trade agreement impacting North America was the passage of the Canadian Free Trade Agreement (CFTA) between the United States and Canada and later the North American Free Trade Agreement (NAFTA), which encompasses trade policies among the United States, Mexico and Canada.

The passage of GATT and NAFTA set the course toward expanded global commerce that has led to real growth in agricultural trade and new opportunities for U.S. agriculture. As global economic conditions improve with developing countries leading the expansion in percentage gains in per capita incomes, the future looks bright for the continued growth in export demand for U.S. food and ag commodities. We have also seen an impressive upsurge in exports of value-added agricultural products, such as processed meats and fruits and vegetables. The continuation of open global markets is keenly important to Michigan and U.S. agriculture as over one-quarter of our total agricultural production finds its way to foreign consumers.

### Planting Flexibility and Freedom to Farm

The next major influence on U.S. agriculture was the fundamental change in federal farm policy with the passage of the Federal Agriculture Improvement and Reform Act (FAIR) or freedom to farm bill, which eliminated price support programs and supply management mechanisms that had been in place for over 60 years. The new farm program allows producers broad planting flexibility and expands risk management tools through and improvements to the crop insurance program. The freedom to make planting decisions based on market demands is a fundamental change that offers many opportunities for diversification in Michigan.

While the FAIR expands our ability to produce for the market, it will also lead to increased market volatility. In response, producers will need to focus on risk management. Risk management will take on many forms, including price/crop insurance, advanced mar-

keting techniques, joint ventures with other producers and/or handlers, and vertical integration. All of these trends are in response to the need of producers to receive their income from the market.

### Biotechnology/Value-Enhanced Grain

A major catalyst in the expansion of value-added agriculture is the advancement and application of biotechnology in the seed industry.

Value enhanced grain (VEG) includes a wide range of attributes such as waxy, high-oil, white corn or corn that exhibits other desirable traits that make it more valuable to end-users. Profit opportunities, manufacturer quality assurance programs, food safety concerns, and the search for new, more palatable, useful products will drive the change to VEG or identity-preserved grain.

VEG is a small fraction of the bulk grain market today but it's a trend that is attracting companies like Monsanto, Cargill, ADM, ConAgra, Pioneer, DuPont and DeKalb. Companies like Monsanto have responded to these opportunities by reinventing themselves as biotechnology innovators, not just chemical companies. These companies are redesigning the genetics of corn, soybeans and other crops to meet specialty applications. This expansion of value-enhanced crops is not limited to food uses as huge markets exist for biodegradable materials to replace paper and plastics creating a new carbohydrate economy. USDA estimates that within the next 10 years, 50 percent of U.S. corn will be "specialty-attribute" or "identity-preserved."

### Identity Preserved Marketing

Marketing opportunities will also expand as contractual agreements between producers and end-users will become more commonplace to facilitate identity-preserved marketing. There are opportunities for producers to work together cooperatively earning premiums over the price of No. 2 yellow corn by raising specialty grains to better meet end-user demands. H&B Specialties, Inc. of Pleasant Plains, Ill. pays farmers about 25 cents per bushel over ordinary corn. They originate grain for a Japanese corn chip manufacturer and are looking for high test weight, minimal stress cracks and a low percentage of broken kernels.

VEG leads to increased processor and end-user value and opens the door to further value-added processing of agricultural commodities. Currently about 60% of Michigan's corn crop and over 90% of our soybean crop is exported to be utilized outside Michigan. The expansion of value-added processing within the state, such as the recent completion of the Zeeland Farm Soya plant, provides real benefits to producers as well as jobs and economic develop-

ment for Michigan communities. Michigan is already a leader in fruit and vegetable processing and these benefits can be expanded to other crops.

### New Generation Cooperatives

Grower ownership of value-added processing facilities through the formation of "New Generation Cooperatives" provides opportunities for producers to become more vertically integrated and share in the profits of producing value-added products. The trend began in the Northern Plains where over 20 new generation cooperatives have been formed in the last several years processing a wide variety of commodities from sugar beets to bison. This represents a shift in attitude for growers from a producer of raw commodities to a broader view of the overall food system from producer to consumer.

### Organic/natural foods

The natural food market continues to grow with the dairy sector leading the expansion. U.S. organic milk sales are estimated to total \$60 million per year. Niche marketing through health food stores and local cooperatives provides marketing opportunities to growers willing to take the risk in adopting organic cultural practices. Price premiums of up to 30 percent to growers may encourage further expansion of the natural food segment, including grower-owned processing and distribution facilities.

### New technology

New technology is creating opportunities for improved low-cost communication between buyers and sellers. A recent AFBF survey of young farmers showed Internet use has exploded since last year. Nearly one-third reported having access to the Internet. E-mail was used by almost one-fourth of the respondents. The Internet could be utilized by producers of specialty crops and processed products to inexpensively reach customers around the world.

The Internet will also provide for rapid communication between producers and handlers, thus promoting enhanced marketing relationships. The Internet will also bring instant access to world news, weather production information and market news to a wide band of producers at a very inexpensive price.

The availability of global positioning systems, yield monitors and site-specific application of inputs provides producers with information and tools to help evaluate cropping alternatives and facilitate the move to identity-preserved marketing opportunities.

Given the potential impact of these trends, MFB, CPM and MSPC believe it is vital for Michigan producers to arm themselves with the information found in this special insert to further enhance the value of their products. ■

### Governor Announces Tax-Free Renaissance Zones



Panel selects 11 areas statewide, taxes waived beginning Jan. 1

Gov. John Engler announced the recommendations of the Renaissance Zone Review Board for the creation of 11 renaissance zones throughout the state. The zones, which will be free of virtually all state and local taxes for both residents and businesses, are scattered from Detroit in southeast Michigan to three counties in the western-most portion of the

Upper Peninsula. Six urban zones, three rural zones and two military zones were chosen.

The following communities were recommended for renaissance zones:

Zone Type • Acreage • Duration
Benton Harbor/St. Joseph/Benton Twp., Urban 120 acres • 10 years
Detroit, Urban • 1,345 acres • 12 years
Flint, Urban • 836 acres • 15 years
Grand Rapids, Urban • 536 acres • 15 years
Lansing, Urban • 110 acres • 12 years
Saginaw, Urban • 743 acres • 12 years
Gogebic/Ontonagon/Houghton Counties, Rural 2,917 acres • 15 years
Manistee County, Rural • 556 acres • 15 years
Montcalm/Gratiot Counties, Rural 1,870 acres • 15 years
Warren Tank, (former) Military 153 acres • 15 years
Wurtsmith Air Force Base, (former) Military 2,202 acres • 15 years

"Michigan begins the nation's boldest experiment in the renewal of distressed

communities," Engler said. "My philosophy has always been that lower taxes create more jobs. In these distressed communities, I believe that by eliminating the barriers of government, we can unleash the power of the private sector to bring good-paying jobs to Michigan. The nation will be watching this experiment, and they will see Michigan succeed." Engler proposed renaissance zones as a powerful incentive to revitalize economically distressed areas throughout the state. The zones are the ultimate extension of Engler's philosophy that reducing taxes spurs economic growth. By eliminating taxes altogether, Engler is seeking to maximize both the speed and size of the investment in these areas.

Michigan is the first and only state in the country with these tax-free zones, which require only that residents or businesses be located within the zone's geographic boundaries to get the exemptions. Those in one of the zones will pay no Personal Income Tax, no Single Business Tax, no State Education Tax, no Real Property Tax, no Personal Property Tax, no Local Income Tax and no Utility Users Tax.

"Now, the next step is to go tell people in other states that they should bring their businesses to Michigan because we've got the most powerful incentive in the nation. Zero taxes. No paperwork, no huge bureaucracies, just zero taxes if you invest in our neediest communities," Engler said. "I predict you will see an increasing level of investment in these renaissance zones." Engler also complimented the 20 local communities that applied for a zone for rising to the challenge of becoming a renaissance zone. The law ultimately allowed only 11 to be chosen, including the two closed military installations.

"For the first time, the state said, 'We'll give up our share, but you've got to give up the local share of taxes also to make this work,' and 20 communities rose to that challenge. I was pleasantly surprised to see governments at all levels work together on these zones with an unprecedented level of cooperation. The communities really put a lot of creativity and cooperation into their applications even going so far as to submit joint applications, which is something we didn't expect," Engler said. ■

### Growing America's Renaissance

Michigan has done the unthinkable by creating 11 tax-free Renaissance Zones. Businesses and residents who locate in one of these selected areas pay virtually no taxes for up to 15 years. The 11 Renaissance Zones — six urban, three rural and two former military bases — are located throughout Michigan.

The urban Renaissance Zones are located in the Benton Harbor/St. Joseph area of southwest Michigan, Detroit, Flint, Grand Rapids, Lansing and Saginaw. The rural zones are in Gogebic/Ontonagon/Houghton counties in the western Upper Peninsula, Manistee in northwest Michigan and Montcalm/Gratiot counties in the heart of the state. The two former military bases are Warren Tank in southeast Michigan and Wurtsmith in northeast Michigan.

By law, Renaissance Zones waive the following local and state taxes: Michigan Single Business Tax, Michigan Personal Income Tax,

Michigan's 6 mil State Education Tax, Local Personal Property Tax, Local Real Property Tax, Local Income Tax, and Utility Users Tax.

#### What is a Tax-Free Renaissance Zone?:

Michigan's Tax-Free Renaissance Zones are 11 regions designated as virtually tax free for any business or resident presently in or moving to a zone. The zones are designated to provide selected communities with the most powerful market based initiative — NO TAXES — to spur new jobs and investment. Each Renaissance Zone can be comprised of up to six smaller zones (sub-zones) which are located throughout the community to give businesses more options on where to locate.

#### What taxes would a business still pay in a Renaissance Zone?:

A business would pay unemployment insurance, social security taxes, worker's compensation, sewer and water fees which are either fed-

eral taxes or fees for service. Businesses would also pay property taxes which result from local bonded indebtedness or special assessments so as not to jeopardize the community's current bonds. Businesses would also pay Michigan's six percent sales tax. Michigan does not allow local sales taxes.

Montcalm/Gratiot Counties' Renaissance Zone Located in the heart of Michigan's Lower Peninsula, Montcalm and Gratiot Counties reflect the diversity of the state's agricultural abundance.

Approximately 80% of land base in both counties is used for agriculture, making the location of a processing facility ideal.

The two counties are among the leaders in the state in the production of field corn, seed corn, dry edible beans, potatoes, soybeans, alfalfa and a wide variety of processing vegetables. Livestock, dairy and poultry production also

occurs in the area.

The two counties are blessed with rich soils, some of which are sandy loam and are moderately to well drained. Water resources are excellent, with most irrigation water coming from wells ranging from 100 to 300 feet in depth.

There are almost 50,000 acres of irrigated land within the two counties.

Industrial and commercial development is evident in the area with six existing industrial parks (3 certified) and an additional three certified parks are planned.

Immediate access to state highways, freeways and other transportation, making a close link to your markets.

An "Agricultural Alliance" already in place which is a working partnership among local farmers, banks, businesses, government and state agricultural organizations to help address your needs. ■

### The Michigan advantage

Food and agriculture in Michigan is a \$37 billion industry, the state's second largest, representing every phase from growing and processing to packaging, retailing and distribution. The state leads the nation in production of seven commercial crops, ranking fifth or higher in 25 others. The output of Michigan's fields and farms is the second most diverse in the U.S. — from apples to zucchini and just about everything in between.

#### Michigan:

- Home of the nation's premier agricultural land grant college, Michigan State University, established in 1855.
- A skilled and well-trained workforce

- Key link on the Mexico-to-Canada NAFTA highway, including the newly modernized Port Huron-Sarnia rail bridge connection to Canada
- Abundant supply of both surface and ground water for growers and processors
- Four federally recognized wine grape-growing areas bordering on Lake Michigan
- A regulatory environment that encourages and supports innovations like field composting of fruit and vegetable wastes
- America's fourth ranking exporter of fruit products, seventh in vegetables
- Exported a record \$836 million in food and agricultural goods in 1994



The opening of Zeeland Farm Soya's (ZFS) soybean processing facility represents just one of the many ways Michigan producers have realized an added value to a commodity. ZFS's processes almost 6 million bushels of soybeans and is looking to expand their processing capacity by 50 percent.

### A guide for food exporters

#### Michigan can help food exporters!

Export of food products, food processing equipment and agricultural commodities are the growth markets in the 1990s and beyond!

While U.S. food markets are generally very mature and increasing at only about 1 percent per year, some parts of the world have four times that growth rate. And they have the funds to pay for high-quality U.S. foods.

The challenge for Michigan food processors, commodity shippers and agricultural suppliers is to take advantage of these growth markets by looking beyond our borders. As the world moves toward a global economy, successful Michigan companies will be prepared to sell in the international marketplace.

To help companies compete in the world economy, the Michigan Department of Agriculture and the Michigan Jobs Commission have put together

the following slate of services.

#### Export directory

The key tool for industry exporters is the Michigan Food and Agricultural Export Directory. It lists all known companies with a Michigan processing or production plant, that are currently exporting or want to start. Listings are free.

Benefits of being included in the Export Directory are two-fold. All listed companies receive the Michigan Market Share that informs about state-organized domestic marketing and export programs. The directory is also mailed free of charge to food exporters and U.S. overseas trade offices, thus participants receive free promotion of their company.

#### Research and Education

MDA-International staff also provides advice about exporting, limited, research and statistical

information. Companies should perform their own cultural and product research of an intended foreign market, but MDA can help determine which markets are generally most promising.

Also as you research foreign markets, MDA-International can help you locate good resources for information such as agriculture contact in U.S. embassies, Michigan international offices and other agencies.

Export education programs are organized annually for Michigan food producers.

#### Six International Offices

Michigan Jobs Commission's six international offices can be a tremendous asset to exporting companies. The state has staff in the following locations:

- Toronto, Canada
- Mexico City, Mexico

- Brussels, Belgium (including United Kingdom and Germany)
- Johannesburg, South Africa
- Tokyo, Japan
- Wanchai, Hong Kong

These offices can provide targeted lists of foreign distributors, identify competitive products and provide other in-country assistance. They also return trade leads to Michigan, for distribution to appropriate food and ag companies.

#### Export market activities

MDA-International occasionally organizes pavilions at international food shows, such as the U.S. Food Export Showcase in Chicago and the Festival de Alimentos y Bebidas in Mexico City. Well-targeted trade shows are great places to meet potential distrib-

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### GREEN to meet needs of processors and growers

by Fred Poston, vice provost and dean, College of Agriculture and Natural Resources, Michigan State University

Michigan plant commodity groups and food processors asked Michigan State University to develop a plan to prepare them to meet the economic and environmental challenges of the coming century. Working with MSU, these groups developed GREEN (Generating Research and Extension to meet Economic and Environmental Needs): a plan to generate new research and educational programs to meet a wide range of economic and environmental needs identified by growers and processors.

Plant agriculture and processing industries want a rapid, integrated response from MSU to develop and implement improved management programs that increase profitability while reducing undesirable environmental impacts and improving food safety. They want research on new processing techniques that will add value to Michigan raw commodities, as well as studies that will help them gain access to new markets for current and subsequent products.

Currently, eight projects aimed at enhancing production of Michigan specialty crops have been funded through GREEN, including studies on using streptomycin to control fire blight in apples, testing and evaluating a tunnel sprayer for high-density fruit crops, using *Bacillus thuringiensis* transgenic potatoes to manage Colorado potato beetles, controlling bacterial and fungal diseases of tomatoes, evaluating alternative apple orchard management systems, developing alternatives to Lorsband to control the onion maggot, and controlling potato late blight. Several new projects soon will be identified as a result of a call for proposals this past February.

In January, the GREEN advisory group decided that the next group of funded projects should focus on value-added initiatives. The term value-added includes not only the development of new food

processing ventures, but also the revitalization of existing industries that play a key role in Michigan's economy.

The advisory group felt that it needed to take a two-pronged approach to fully address value-added opportunities for Michigan's plant industries:

1. A long-term strategy that will allow MSU scientists and educators to more effectively identify, promote and develop value-added programs for small and medium-sized processors in Michigan.

2. A short-term strategy to bring instant visibility to the value-added programs. This is necessary because the latest state appropriation for GREEN was for one-time, non-recurring funds. The projects will need to demonstrate immediate, tangible progress to gather support for adding the funds on a recurring basis to the base budgets of the Michigan Agricultural Experiment Station and MSU Extension.

The GREEN Advisory Group is compiling potential project ideas to implement its long-term strategic plan. These include:

- Hiring a food technologist with industrial experience. This person will provide support to small and medium-sized processors, assist the director of the Food Industry Institute and act as a liaison to industry to address practical production concerns.
- Hiring a coordinator to assist in the development of new cooperatives. The initial effort may be with soybean extrusion and alfalfa pelleting in the Thumb region.
- Hiring a feasibility analyst for rapid, initial studies of proposed projects. This economist would also help educate people about and promote the benefits of locating agricultural processing operations in renaissance and empowerment zones, initially in Wayne, Montcalm and Gratiot counties.
- Hiring a business specialist to assist food companies in interactions with business expertise at

Michigan State University. It is essential that MSU provide both business and technical expertise to new entrepreneurs and to small and medium-sized companies.

The advisory group has also identified several potential short-term strategies. These include:

- New product development, including expanding the tart cherry market through the development of a cherry paste for use as a bakery product; revitalizing the sugar beet industry by developing a pellet alfalfa product that would be introduced into sugar beet rotation to improve soil health; remediating vomitoxin in wheat through novel processing and cooking methods; developing food and non-food value-added products from corn starch; and developing new and improved packaging technologies for Michigan-grown plant products.
- A three-phase new entrepreneur development program. Phase one might include an annual, one-day workshop for new entrepreneurs that would provide information on access to resources available at MSU, as well as those available at the federal and state levels and from private organizations that interact with food companies. Participants would be given information on how to start a food business.

Phase two would put phase one workshop participants who require specific information or problem solving in contact with appropriate experts at MSU or elsewhere. This would be done on a consultant fee basis.

Phase three would locate, at MSU or elsewhere, appropriate food processing, packing

or food safety facilities required to develop a product, solve a problem or handle any other facet of bringing a new product to market. This would be done on a consultant fee basis.

- MSU Food Day, which would demonstrate the extensive faculty expertise and food facility capabilities at MSU. Participants would see postharvest processing facilities for fruits and vegetables, cereal, dairy and meat products; and food safety and toxicology facilities associated with packaging, sensory evaluation, kitchen testing, veterinary inspections, market analysis, and library and information systems. Participants would be provided with a reference source of the available expertise and facilities.

No other university has structured its plant research and educational programs this way. Through GREEN, MSU will set the standard for integrated plant agriculture research and information delivery, and rapidly solve grower and processor problems.

GREEN is a partnership between MSU, the Michigan Agricultural Experiment Station, MSU Extension, state government, the state's commodity groups, food processors and consumers. Capitalizing on the opportunities in Michigan's plant agriculture and processing industries has the potential to create new jobs and add millions of dollars to the state's economy. The capacity for growth exists in virtually every county in the state. GREEN will allow plant agriculture and processing industries to reach their potential and invigorate the entire Michigan economy. ■

## MICHIGAN STATE UNIVERSITY

### MDA director announces agricultural alliance for Gratiot-Montcalm renaissance zone



Dan Wyant, director of the Michigan Department of Agriculture, announced the formation of an "agricultural alliance" for the Gratiot-Montcalm renaissance zone. The alliance is composed of state and local agricultural leaders and organizations who will provide ongoing collaboration and leadership on agricultural economic devel-

opment assistance in the zone.

"Just like Governor Engler's renaissance zone concept is a bold experiment in the renewal of distressed communities, the formation of an agricultural alliance is unique in forging a partnership among independent business people and diverse agricultural organizations to help two of the poorest counties in Michigan," said Wyant. "The enormous tax-free benefits of the Gratiot-Montcalm renaissance zone, along with the alliance guiding its promotion, will attract food and agricultural value-added processors to the area, providing much needed jobs and investment to the counties and better markets for farmers."

Renaissance zones were created last year by a series of bills in which state and local taxes are virtually eliminated for up to 15 years. Several communities developed plans and submitted applications for the renaissance zone designation with 11 zones being created throughout the state on January 1, 1997.

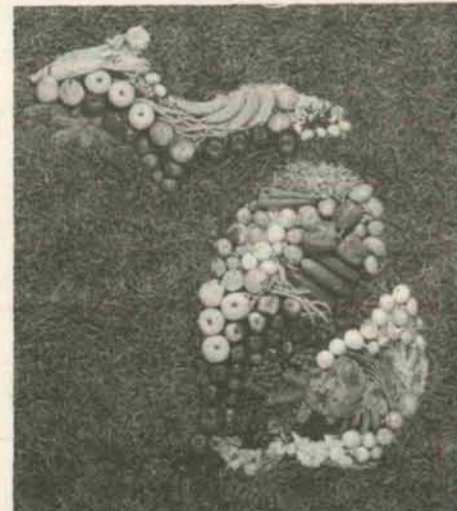
"The Montcalm-Gratiot renaissance zone is the only one in Michigan that targeted, as part of its economic development plan, the attrac-

tion and expansion of value-added food and agricultural processing," said Doug Rothwell, CEO and department director of the Michigan Jobs Commission. "We believe that our national campaigns plus their agricultural alliance efforts will spur economic growth."

The farm and agricultural business leaders of the alliance will identify and categorize several opportunities that appear appropriate for Gratiot and Montcalm counties. Next, the agricultural alliance must refine the business aspects of the individual concepts.

"This bi-county effort is recognizing the independent hard work of many groups and now our collective challenge is to apply our efforts and resources toward projects that will lead to new investments and jobs," said Don Schurr and Franz Mogdis, co-chairs of the Gratiot-Montcalm renaissance zone Committee. "Never before have we had this many diverse agriculture-related business interests pool their abilities to work on project possibilities, we are very excited!"

Members of the Gratiot-Montcalm Renais-



sance Zone agricultural alliance include a large number of state and local organizations and individuals committed to economic development in the region. ■

### A guide for food exporters

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utors, and retail or food service purchasers. MDA also organizes other targeted export promotions.

#### Diplomatic assistance

When an export shipment becomes entangled in government bureaucracy - either stateside or in another country - and you cannot resolve the situation, one of your calls should be to MDA-International. While MDA should "pull strings" in another country, we may be aware of diplomatic channels or alternatives that could help resolve the situation.

MDA-International is also responsible for reporting unfair trade practices experienced by our companies to the agencies that negotiate such agree-

ments as NAFTA and GATT. Often, several MDA divisions work together to develop "work plans" that will facilitate entry for Michigan food products into other countries.

#### MIATCO Programs

MIATCO, the Mid-America International Agriculture Trade Council, has a federal budget of several million dollars to promote the export of Midwest foods. MIATCO organizes several export activities every year, and Michigan companies with relevant products may join them for reasonable participation fees.

MIATCO also has a free newsletter available to Michigan food exporters and excellent in-country resources in targeted regions.

MAP, the federal Market Access Program (formerly called MPP), makes a few million dollars available as direct financial assistance to Midwest food exporters. No other U.S. product line enjoys such a boost from the federal government!

MAP functions as a matching-funds program; its dollars must be spent to promote your Midwest-produced food in a targeted foreign market and matched by your own dollars, or those of a foreign third party. Eligible expenses include retail and trade advertising, trade show booth space, in-store sampling and other promotional expenses.

Up to 50 percent of these costs are reimbursable for small companies; 33 percent for large companies (> 500 employees). Applications are

accepted quarterly.

#### Other resources

- Certificates of Free Sale - Food Division, Michigan Department of Agriculture, P.O. Box 30017, Lansing, MI 48909 • (517)373-9732
- Certificates of Origin - Contact your local Chamber of Commerce.
- Harmonized System Code - U.S. Census Bureau, Commerce Department, Washington, D.C. • (301)457-3484
- Import Information - U.S. Customs Service, Treasury Department, 477 Michigan Ave., Rm. 200, Detroit, MI 48225 • (313)226-3149
- MIATCO - 400 W. Erie St., Ste. 100, Chicago, IL 60610 • (312)944-7777 ■



### Corn Marketing Program of Michigan

#### Earl Collier, President

The checkoff program is entering its fifth year of operation and through checkoff funds many positive things are happening in the corn industry. U.S. corn exports have doubled to 2.3 billion bushels annually. Plastic research developed at Michigan Biotechnology Institute has produced biodegradable plastics from corn. A no-sodium no-cholesterol salt substitute from corn has progressed to the marketing stage. Research on hemp dogbane management has been completed and research to increase corn fed to dairy cattle has been successful. Our ethanol program is continuing and Michigan is still one of the largest users of ethanol for blended fuels in the country, using some 60 million gallons annually. Checkoff dollars have funded nearly 20 research projects at Michigan State University.

The goal of the Corn Marketing Program of Michigan is to enhance the economic position of the state's corn producers by providing for the growth and expansion of the corn industry through foreign and domestic markets. We are accomplishing this through development of added-value products, promotion and research.

The corn industry wants to double the value of corn by year 2002. The current crop at the producer level is worth about \$27 billion. The goal is to increase that to \$40 billion during the next six years. The Corn Marketing Program of Michigan will be working cooperatively with other corn-producing states to meet that goal and improve profitability to Michigan farmers. The corn farmers in the state can be optimistic about their future. There are more than 4,000 products available made from corn and new products, and new markets supported by checkoff dollars are developing rapidly.

This year we will be working with the National Corn Growers Association in support of the National Genome Initiative. The agriculture industry must strive to efficiently and economically improve corn production capabilities. By understanding corn's genetic code we can combat threats from disease, pests and climate changes without harming the environment. Modern biotechnology through plant genome mapping, sequencing and trait identification holds the key to achieving this goal. We are asking Congress to fund \$143 million over the next five years for the Corn Genome Initiative. This important research holds the future of the corn industry.

### More pigs, more corn, more profits

The Michigan Pork Alliance (MPA) and the Corn Marketing Program of Michigan (CMPM) launched an educational campaign to alert corn producers to the profits available in the hog production industry. "Expanding pork production in Michigan would increase the demand for corn right here in the state and that means savings in shipping cost," says Gary Krug, past president of CMPM.

Dale Rozeboom, Michigan State University swine specialist says, "Corn producers are natural entries into the hog producing industry. They already raise the feed and they could use their current labor force. A 1,000-head swine operation would need a 8,000 sq. ft. building and 1.5 hours a day in labor. A \$150,000 investment could realize a 10 to 15 percent profit."

Thorn Apple Valley, a major pork processor in Michigan, needs 4 million hogs annually to meet its customer demands. Michigan currently provides 2 million head. Estimates are 2 million more hogs in the state would consume 28 million bushels of corn and save 25 cents a bushel in shipping costs.

Sam Hines, executive vice president of the Michigan Pork Producers Association explains that "a nursery or finishing operation on their farm would mean extra income to corn producers."

For information, phone CMPM at 1-800-323-6601 or MPA at 517-699-2145.

## Future developments in value-enhanced Corn

The growth of the value-enhanced corn (VEC) market depends upon developments occurring in two areas: the development of cost-effective merchandising vehicles (means of getting VEC to end-user) and the development of improved types of VEC. Continued introduction of innovative VEC hybrid types is vital for market growth.

One of the primary technologies that will allow for increased documentation of agronomic practices is the use of global positioning systems (GPS). GPS uses satellite positioning technology to allow producers to adjust agronomic practices such as fertilizer rate, insecticide/herbicide use and rate, and tillage practices automatically at the time of application. They also use GPS to monitor crop yields during harvest. It is anticipated that producers will eventually be able to give a printout (or some form of electronic data) with each load of corn sold. The data will include the hybrid or hybrids, the chemical application rates used on the corn crop, fertilizer and application rate used and other agronomic practices deemed important to the consumer or end-user. The data generated by the GPS will be passed through the marketing channel with the corn and will allow for easy segregation of corn to specific user requirements based upon hybrid or agronomic practices.

A second technological factor, which will increase the growth of VEC, is the increasing awareness by end-users of the value of consistency to their processing operations. The poultry processing industry has been a leader in realizing the processing value of having consistent quality animals in their facilities. Vertical integration is beginning in the beef and pork industries as well.

Certain U.S. corn processors have used selective purchasing or contracting to acquire the type of corn they desire. A major corn snack food processor has an extensive contracting system to produce the desired hybrids at a specified quality. A major dry-milling company purchases only corn that meets their stringent processing standards. They publish yearly a list of acceptable hybrids and suggest that the corn be low-temperature dried. Then each load of corn delivered to

their facility is tested by a set of proprietary procedures prior to being unloaded. Corn not meeting their specifications is rejected, and their price for corn varies with their demand for corn. They raise the price to get the desired flow of corn into their facility. Other dry millers purchase corn based on density, stress cracks or both.

The wet milling industry, feed manufacturers and livestock feeders are also beginning to quantify the value of consistent quality corn. A major U.S. wet milling company has published to local elevators and producers a list of hybrids with higher starch yielding potential. They also have restricted the number of acceptable waxy hybrids for which they will contract. Feed manufacturers are learning that particle size of hammer-milled corn and the resulting formula feed is more uniform when consistent quality corn is purchased. By combining consistency with selection of hybrids of improved value, the cost of purchasing non-commodity corn can be more readily justified. It is projected that the current commodity corn system will be modified, due to market forces, to accommodate the development of merchandising pathways for specific end-use quality corn.

A final force that will help drive corn processors to purchase hybrids specific to their process is the increased variability in hybrids due to biotechnology and genetic engineering. The corn processors will purchase value-enhanced corn as a defensive measure against processing problems incurred by milling corn, which will result in low milling yields. If the producer received financial benefits only by producing more corn, then the seed companies' only incentive is to produce higher yielding hybrids, without regard to milling characteristics. A high-yielding hybrid that has poor milling characteristics could become a preferred hybrid for producers. The likelihood and speed of producing such a poor milling hybrid has increased with the new abilities to introduce more exotic genetic material.

The continued development of enhanced-value hybrids is vital to the continued growth of the VEC market.

#### Nutritionally dense corn

Increasing the nutritional quality of the corn crop for livestock or human food usage is the goal

of producing nutritionally dense corn. Increasing lysine or other amino acid content, increasing nutrient bioavailability, increasing oil content or modifying oil composition, and the addition of synthesis pathways for nutritionally desirable compounds (such as anti-cancer or cholesterol-reducing) are examples of this technology.

One goal in this use of VEC would be to develop hybrids that contain all the nutritional requirements of specific animals. Different hybrids would be targeted for different animals and even for different age/use of animals (gestating sows vs. feeder pigs as an example). By layering traits into the hybrid, more value can be realized than by adding only one trait. The value is in not requiring supplements to diets and reduced food/feed preparation costs.

#### Enhanced processing value

Processors have long observed that some corn has better processing characteristics than others. Hard endosperm corn results in better product yields for dry millers. Current commercial yellow dent hybrids have extractable starch yields that increase product value from 36 cents to \$1 per bushel. It has been estimated that about 70 percent of the wet milling starch yield variability in low-temperature dried corn is due to genetics and 30 percent is due to environmental factors.

#### Enhanced product value

Research of VEC hybrids is focused on the value of the resulting products after processing. For example, waxy or high-amylose corn is a VEC because the characteristics of the resulting starch are superior to commodity corn starch for some applications. The enhanced value is in the product rather than in the corn. As a livestock food, waxy corn would be similar to regular dent. Most of the research is focused on starch characteristics but the research on high-oleic and other specialty corn oil fatty acids would also be included in their area. It is also possible to increase the quality of the gluten meal or gluten feed resulting from wet milling by regulation of the protein composition and quality. Other possible hybrids to enhance product value could produce in-situ extractable amino acids, organic acids or other industrial chemicals. One interesting concept would be to develop a hybrid that expresses polylactic acid instead of starch.

## National corn genome initiative

The National Corn Growers Association believes that the future of corn is written in corn's genetic code. The National Corn Genome initiative, supported by NCGA, private sector agribusiness and trade associations, calls for federal funding of \$143 million over a five-year period, for corn genome mapping. A corn genome map will give us the particular locations of genes that control important traits (such as stress tolerance, resistance to disease or pests, yield and nutritional value). These genes can then be incorporated into improved crop varieties to address a diverse range of producer and consumer problems and needs. To compete in the global corn market, U.S. agriculture must continually strive to efficiently and economically improve corn production capabilities such as combating serious threats from disease, pests, and climate changes without harming the environment. Modern biotechnology through plant genome mapping sequencing and trait identification holds the key to achieving this goal.

#### Need for immediate action

All cereal crops have related DNA gene structures. If a foreign country identifies and patents critical genes in rice, it will likely create a serious hurdle to U.S. variety development in other cereal crops. This would adversely affect research advancement in the U.S. and could have a negative impact on U.S. producers.

#### Far-reaching benefits

Aside from protecting U.S. interests and access to important biotechnology and gene patents, the benefits of a corn genome map include:

- Significant reductions in crop losses and reliance on pesticides
- Improved nitrogen-use efficiency limiting potential for nitrates in the water supply
- Improved animal nutrition leading to healthier meat and increased meat productivity
- Significant reductions in environmental problems confronted by livestock producers, such as modifying the digestibility of phosphorus in feed corn

- Improved yields by 3-4%
- Resistance to diverse environmental conditions, such as drought
- 20 percent increase in production efficiency within 10 years adding at least \$4 billion in added farm value per year laying the groundwork for similar advances for other cereal crops

#### NCGA request for action

- Congress should set aside \$10 million in Agricultural Research Service Funds for the National Corn Genome initiative. (FY98 Ag appropriations)
- Congress should establish a new "genome mapping" category within the competitively awarded National Research Initiative and appropriate not less than \$10 million. (FY98 Ag Appropriations)
- Congress should ensure that not less than one-half of the research funds in the Fund for Rural America be set aside for basic research projects and that priority be given to plant and animal genome mapping projects. (Farm Bill Research Title Reauthorization)

## Alternative Marketing Channels for US Corn

Four general categories of corn have been delineated and are described in this chart. These categories are illustrations of the types of market channels that are used to produce and merchandise value-enhanced corn.

	Level I	Level II	Level III	Level IV
<b>Differentiating Characteristics</b>	Identity Preserved	Specialty Corns	Super/Commodity	Standard/Grades
<b>Relative Value/Premium</b>	High	Medium	Low	None
<b>Buyer Control</b>	Variety	Min/Max Attributes	Attribute Preferences	Grades Only
<b>Production Practices</b>	Certification			
<b>Other</b>				
<b>Attribute Testing</b>	Buyer's Discretion	Cost/Value Driven	Efficient/Consistent	Grade-Driven
<b>Types of Producer Contracts (Prod/Merchandise Risk)</b>	Acreage	Production	Normal/Open	Normal/Open
<b>Producer Linkages</b>	Production	Bushels		
<b>Minimum Segregation</b>	Bushels	Normal/Open		
<b>Product Volumes</b>	High	Moderate	None	None
	Farm	First Point of Sale	Merchandise-Determined	Merchandise-determined
	Low	Moderate	High	Very High

Currently, the majority of value-enhanced corn is merchandised through the Level I channel. However, the Level II and Level III

marketing channels provide tremendous opportunity for growth over the next five years as a relatively low-cost method to market signifi-

cant volumes of certain value-enhanced corns in the United States and export markets.

### Added-value cooperative efforts in the Thumb

Last year, a project was initiated in Huron County to look at how the agriculture economy might be enhanced within the project's guidelines. The project, "Sustaining Rural Communities", was designed to foster economic development opportunities that are economically feasible, environmentally sound and socially acceptable.

A series of meetings was held to identify and explore opportunities in niche marketing, crops and the dairy/livestock production areas. A number of possibilities were identified and information was gathered.

During an Innovative Farmer tour in Ontario, the group visited a soybean extruding/expelling operation in Wingard and learned about the process. As a result of this visit, the Huron County group proceeded to dig into this venture.

Bob Boehm, Farm Bureau; Carl Osentoski, Huron County economic development director and; Jim LeCureux, Huron County Extension agent participated in a three-day training session in Crookston, Minn. in November. The purpose of the training session was to learn how to put an added-value second generation cooperative together. Speakers included project coordinators, lawyers, CPAs, public relations directors, cooperative board members and consultants that have conducted feasibility studies.

According to Frayne Olson, assistant director for the Quentin Burdick Cooperative Institute at North Dakota State University, there are about 100 added-value cooperatives operating, in the funding stage or in the planning stages, in

the Northern Plains area.

An added-value cooperative is very similar to a traditional cooperative in that it is owned and controlled by local members. However, it does vary in that the members can sell and buy equity shares in the cooperative, and upon buying a share, they have the rights and the obligations of delivering a given amount of product to the cooperative.

A delegation from Huron County also attended a one-day added-value conference at Iowa State University. While in Iowa, they participated in a two-day training session at Triple "F" Corporation, manufacturers of extrusion equipment. In addition, they met with a group that is developing a cooperative in Iowa and visited an existing soybean extruding facility in Monticello, Iowa.

Upon returning from the Iowa trip, it was decided to move forward with the added-value soybean processing cooperative concept. A series of 11 information meetings were held in the Thumb area. Sessions were held in Sanilac, Huron, Tuscola and in the Saginaw/Bay county area. Over 600 farmers attended the meetings to learn about the added-value concept and how it varies from the traditional cooperative concept.

At the March 4 meeting, prospective members learned about marketing opportunities for the oil, learned about the difference between traditional cooperatives and added-value cooperatives, and were given the opportunity to ask questions to the legal team.

The Thumb Oilseed Producer's Cooperative (TOPC) was formally organized in early

March and is now seeking memberships. Memberships are \$500 each. The membership fees will be used to pay legal fees, consulting fees for the feasibility and marketing plan studies, and product development.

Discussions are underway with the Michigan Soybean Promotion Board, Michigan Farm Bureau and Michigan State University to explore additional uses for the soybean oil.

While the original steering committee started in Huron County, the TOPC is involving farmers from the entire Thumb and Saginaw Valley area. Now, there is interest in a couple of other projects.

A meeting was recently held to look at aquaculture. There is interest from the private industry to develop on-farm yellow perch production in the Thumb area. 64 people attended the meeting to learn about the Michigan Department of Agriculture's Aquaculture Initiative from Darwin Stith, MDA. In addition, Chris Starr, Bay Port Aquaculture Systems Inc., reviewed their yellow perch production program, areas that need further investigation for on-farm production and how farmers might be involved.

As a result of the soybean and aquaculture projects, added-value opportunities are on the front burner in the Thumb area. The groups are taking a long look at the opportunities. Business plans, production research and feasibility studies are part of the new terminology on the farm. Hopefully, these opportunities will materialize into productive and profitable added-value cooperatives that will enhance the economies in the rural communities of Michigan. ■



### Michigan Soybean Promotion Committee

#### Mary Lou Smith, President

Frequently, the question and answer discussion at many meetings involves profitable soybean production. It is generally agreed there are two ways to increase profitability: reduce production cost and/or sell at a higher price. Growers are continually challenged to find new ways to do both. While more efforts appear to be on developing new, more varied uses for the processed soybean, efforts are ongoing to address the agronomic challenges of input costs, e.g., weed control, disease/insect control, variety selection, site specific management, etc.

Projects that are longer term but still address production are: genetic transformation of disease resistance (white mold), soybean oil quantity/quality and economically using site-specific management (SSM) in soybean production through the global positioning system (GPS).

Considerable human and financial resources are being invested in projects designed to reduce your cost of production. Now, let's review the more glamorous areas of new-use research, which will lead to higher soybean prices.

The processing of soybean oil for various industrial applications holds considerable promise. Soybean oil use in printing inks is now nationwide. Western Michigan University, one of the most respected printing/paper researchers, is annually funded for soyink research. Other soyoil industrial applications being researched are: derivatives of soyoil for paints being done at Eastern Michigan University and special processing of soyoil for roof coatings being researched at MSU.

The MSPC is supportive of national research on industrial soybean oil use in soy diesel fuel, solvents, lubricants, additives and, most recently, in the manufacturing of soybean oil-based coloring crayons, which will be on the market this fall. As a solvent, soyoil has demonstrated ability to dissolve spilled petroleum where environmental concerns exist and an environmentally friendly alternative is needed. It is already EPA-approved.

Comments on soybean oil would not be complete without mentioning the value-added opportunity of growing identity-preserved soybeans with specialty oils of low saturate, low oleic, low linolenic and potentially higher oil quantities.

High-protein feed for animals uses 95 percent of the soybean meal produced. Research continues on this use. At MSU, a research project is on-going on protein needs of replacement heifers. Developing additional soybean protein use research at MSU includes soy-based feeds for farm-raised fish and using soy-based concentrates in reduced-fat meat products. A component processed from the soy meal, called genestein, is being researched for preventing/treating colon cancer by MSU researchers. The processed soy meal contains different antioxidants for researching various effects on different cancers, lowering cholesterol and blood pressure, and reducing the risks for osteoporosis and Alzheimers disease.

National soy protein research receiving in-kind support from Michigan includes using soy protein as an adhesive and binding agent in the manufacturing of wood components (plywood, strand board, finger gluing, etc.) to replace petro chemicals and the manufacturing of ENVIRON™ a marble looking product made from soy protein and recycled newspapers.

Adding value to soybeans can take many forms whether reducing production costs or increasing price. Whether growing identity preserved soys or general production, the mentioned research all has a capacity to increase profitability. Some projects are near term, while some are longer term in duration. Most probably, some research won't be as influential as others. When all is considered, the efforts of the soybean industry on your behalf are far reaching as we strive to add value to your commodity—soybeans. ■

### Pencil manufacturer makes soy crayon breakthrough

Dixon Ticonderoga Corp., famous for its No. 2 Ticonderoga pencil, recently unveiled what it called, "the first major advance in crayons in 100 years."

This major advance is the introduction of a new crayon composed of 85 percent soybean oil. The soybean oil replaces the petroleum oil used in standard crayons. Dixon Ticonderoga claims that the soy-based crayons offer smoother, brighter colors, no flaking and are entirely biodegradable.

Rick Joyce, Dixon Ticonderoga president, says, "Not only is this a completely natural, non-toxic oil base, it produces a clearly better crayon. So, we are eliminating the use of a dwindling resource (petroleum), and relying

on America's farmers, who have given us another use for the soybean."

The soy crayons were conceived by a group of students at Purdue University as part of an annual contest sponsored by the Indiana Soybean Development Council to develop new uses for soybeans.

The new soy-based crayons will be available in packages of 4, 8, 16, 24, 48 and 64 colors, and will be marketed under the title of Prang Fun Pro Crayons. The crayons should arrive in stores sometime in early summer. ■



### Soy-based solvent aids in oil spill cleanup

Amid growing concern regarding the environmental consequences of oil spills and oil spill cleanup, the United Soybean Board New Uses Committee is funding a soy-based biosolvent cleaner project. The CytoSol BioSolvent, developed by Dr. Randall von Wedel of CytoCulture, is an effective agent in oil spill cleanup while remaining environmentally safe.

"CytoSol is unique in its ability to remain

non-toxic and biodegradable while extracting petroleum spilled on beaches or trapped in sand and gravel shorelines and vegetation," explains New Uses Committee Chair Yvonne Wentz. "The cleanup continues even after the initial application, breaking down materials further and further until they can be safely washed away."

Recovered petroleum and CytoSol mixtures are suitable for recycling as burner fuel in

ships and power plants. A single application has proven to be 50 to 90 percent effective, given various conditions.

Von Wedel and his team have tested CytoSol in oil spill simulations along the California coast line and the Alaskan North Slope. Reaction from emergency response agents such as game and fish departments and the Coast Guard has been enthusiastic. ■

### Research shows soybean hulls can be used in water treatment

Agricultural by-products like soybean hulls have often been an underutilized waste material by milling and crushing plants.

Through a soybean checkoff-funded project, researchers are using soybean hulls in treating wastewater and drinking water during filtration. They have developed a process to transform soybean hulls to non-carbonized metal absorbers and to convert hulls to activated metals carbons. The project, which is one of 54 domestic marketing projects funded through the soybean checkoff program, is being overseen by researchers from the U.S. Department of Agriculture (USDA).

"We discovered metal absorption could be achieved by treating soybean hulls with oxidants, such as sodium hypochlorite (household bleach)," says Wayne Marshall, a project re-

searcher from the USDA Southern Regional Research Center in New Orleans, La.

Soybean hulls that come from oil mills are unmodified, or non-carbonized. Because of the unique composition of soybean hulls, they are very effective at absorbing metals. Their affinity for metals also make hulls effective at softening water and removing magnesium and calcium.

Using non-carbonized hulls also is a cost-efficient method of water treatment. The use of the hulls is inexpensive in comparison to current treatment processes.

Currently, ion-exchange resins are most commonly used to absorb metals and filter water. Resins are expensive, says Marshall, and by using the hulls, treatment facilities can reduce costs by not spending as much on resins and investing in soybean hulls.

"This is another example of adding value to the hull and the soybean," explains Marshall.

Non-carbonized hulls can only be used two or three times, but their use in the filtration process does not end with metal absorption. After their useful life as metal absorbers has expired, soybean hulls can become carbonized by mixing the hulls with a suitable binder and compressing them into briquettes. These high-density, carbonized briquettes are superior to non-carbonized hulls for absorption of organic compounds, and are similar to non-carbonized hulls in metals uptake.

"The briquettes are more costly than non-carbonized hulls, but they can be used more often than non-carbonized hulls," says Marshall. "The non-carbonized hulls are not as durable in batch applications." ■

### Michigan: World leader in food production

- The Michigan Beef Alliance is working to expand beef production, processing and consumption while the Michigan Pork Alliance is working to expand production and markets for "the other white meat."
- Wines from Michigan's 24 wineries — dry and semi-dry whites, sparkling and dry reds — are taking gold medals in international competition.
- Ranches in Michigan are raising buffalo as well as ostrich and its cousin-bird, the emu, as lower-fat alternatives to beef.
- Michigan's rapidly developing aquaculture industry already ranks seventh nationally in trout sales
- Efforts are underway to revive the cranberry growing industry that thrived in Michigan in the 1800s.
- Growers around the state are bringing back commercial production of chestnuts and walnuts.
- Michigan, 10th in national soybean production, recently opened a soybean processing plant, an \$8-million facility in the western Michigan city of Zeeland.
- Pioneering research at MSU in the early 1980s led to federal approval of canola oil as a food product. Today this popular oil, low in saturated fats, is a major commercial product found in 20 brands of cooking oil.

#### Michigan food processing companies

- American Soy Products (Saline), soy foods, juices
- American Spoon Foods (Petoskey), jams, jellies
- Archway (Battle Creek), cookies
- Aunt Jane's (Croswell), pickles
- Ball Park (Detroit), hot dogs, meat products
- Bil-Mar/Mr. Turkey (Zeeland), poultry products

- Comstock/Michigan Fruit (Fennville), canned pie filling
- Domino's Pizza (Ann Arbor), pizza
- Eden Foods (Clinton), soy milk, foods
- Faygo (Detroit), pop
- Frito-Lay (Allen Park), snack foods
- Gerber (Fremont), baby foods, juices
- Graceland Fruit (Frankfort), dried cherries, cranberries
- H.J. Heinz & Co. (Holland), pickles, vinegar, baby foods
- Hygrade (Southfield), meat products
- Jiffy/Chelsea Milling (Chelsea), baking mixes
- Kellogg's (Battle Creek), cereals
- Koepf's Bakery (Oak Park), breads, rolls
- Leprino's (Allendale), mozzarella cheese
- Little Caesar (Detroit), pizza, prepared foods
- Mead Johnson (Zeeland), infant and diet foods
- Michigan Soy Products (Royal Oak), tofu, soy milk
- Michigan Sugar (Saginaw), beet sugar
- Monitor Sugar (Bay City), beet sugar
- Morton Salt (Manistee), salt
- Pleva's Meats (Cedar), cherry meat expander
- Post/General Foods (Battle Creek), cereals
- Purity Foods (Okemos), spelt flour, pasta
- Ralston Purina (Battle Creek), cereals
- Rocky Top Farms (Ellsworth), fruit products
- Sanders (Highland Park), baked goods, toppings
- Speas (Fremont), apple products
- Stokely USA (Scottville), canned fruits, vegetables
- Stroh's (Detroit), ice cream
- Thorn Apple Valley (Southfield), meats, bacon
- Vlasic (Bridgeport), pickles
- Welch's (Lawton), fruit juices
- Yoplait (Reed City), yogurt

Doesn't your company belong here? ■

### Pork industry seeks U.S. companies to develop processed pork products for Japanese market

The U.S. Meat Export Federation (USMEF), in cooperation with the National Pork Producers Council (NPPC), announced plans to enroll small and medium-sized companies in the United States in its push to develop new processed pork products for the growing Japanese market.

"This is a chance for U.S. companies to learn about the Japanese market and capitalize on a significant new business opportunity," says John Cravens, USMEF director of pork programs. "The idea is to bring U.S. and Japanese companies together to develop new products in the United States that are tailored for Japanese tastes and specifications for export to Japan."

The project began last year with 15 U.S. companies and a number of Japanese firms coming together to develop five processed pork items for export to Japan. Each product was specially formulated, processed and tested in Japan; most are being introduced this week in the U.S. Meat Pavilion at FODEX, Japan's largest food show. They include Subuta, the meat portion of sweet and sour pork; Tonkatsu, a battered and breaded pork cutlet; seasoned spareribs; seasoned pork slices and sticks; and a special sausage for the Japanese market.

"We're off to an excellent start, but it's important now to expand the program and bring in new participants, particularly small and medium-sized companies that have the flexibility and willingness to customize products that are unique to the Japanese market," says Cravens. "We're looking for about 15 U.S. companies, then we'll match them up with Japanese importers, restaurant chains and retailers."

The process will require the U.S./Japanese teams to work together over the next 12-18 months to develop and commercialize a variety of new processed pork products for export to Japan. In partnership with the National Pork Producers Council, USMEF will use pork checkoff funds to bring Japanese team members to the United States during the summer of 1997 to meet with the selected U.S. companies and begin the development process. The Product Development Department at NPPC will help support the teams' development efforts, while USMEF will support the marketing and promotional work in Japan.

USMEF and NPPC will also sponsor a special export workshop in Chicago, April 23-25, for interested food processors. The workshop will be held at the Doubletree Suites Hotel in Glenview, Ill., and will give

processors the knowledge they need to develop, manufacture and export processed pork products to Japan. Companies interested in joining the project are not required to attend the workshop, although USMEF recommends they participate.

According to Cravens, the project is part of the U.S. strategy to increase trade flows to Japan for U.S. pork, despite an otherwise restrictive import system. Under the Uruguay Round Agreement, the Japanese government is allowed, in effect, to hike import tariffs on pork by approximately 24 percent when imports increase beyond previously determined levels. This import safeguard for pork, as it is called, has been imposed for much of the past two years. A number of processed pork products, however, are not subject to this safeguard and can be imported under a flat duty.

Cravens adds that the import safeguard for pork, coupled with a reduced domestic supply, has dramatically increased the cost of raw materials for Japanese processors. As a result, Japanese companies are looking offshore for competitively priced alternatives that can satisfy Japanese tastes and specifications. In 1996, processed pork products that were imported into Japan under a flat duty were up 65.4 percent over 1995, hitting a record 99,334 metric tons. The U.S. share of this import market was 58.5 percent, and USMEF expects sales of U.S. processed pork products to continue to grow as more U.S. companies take advantage of this opportunity.

Any food processing company interested in submitting an application for the project or wanting more information about the workshop should contact John Cravens at:

USMEF Headquarters  
1050 17th Street, Suite 2200  
Denver, Colorado 80265  
303-623-6328 FAX: 303-623-0297

The U.S. Meat Export Federation is a national trade association responsible for developing international markets for the U.S. red meat industry. For its pork program, USMEF contracts with the National Pork Producers Council and receives funding from USDA, exporting companies and a number of corn, sorghum and soybean groups. Headquartered in Denver, USMEF has offices in Tokyo and Osaka, Japan, in addition to marketing offices in 10 other foreign countries. ■

### Aquaculture: Shrimp farming in Michigan

The state of the world shrimp farming industry continues to change at a rate unimagined just a few years ago. Shrimp prices are at all-time record highs and the industry is desperately looking for alternate methods of disease-free and environmentally correct production of shrimp. In 1994, the United States had a trade deficit in seafood of over \$3.5 billion, of which shrimp comprised more than \$2.6 billion, or almost 75 percent of the total! Its closest rival was lobster, standing at only \$450 million.

Seafood Systems, Inc. is a world leader in developing commercial technology for the production of marine shrimp. The company has an operating indoor, recirculating research facility in Okemos, Mich. that is the first of its kind. The facility was designed and built to research technologies that can create, for production of shrimp in the United States, a bio-secure, environmentally correct, commercially viable marine shrimp production system.

Over the last 20 years, shrimp aquaculture around-the-world has grown into a multi-billion dollar per year business. In 1995, farm-raised shrimp production was estimated to have been 712,000 metric tons, or approximately 1.57 billion pounds. This represents about 27 percent of total World shrimp production. Production from shrimp fishing peaked in 1992 at 2.7 million metric tons and has fallen every year since.

### New cherry paste!

The Michigan Cherry Industry annually contributes 75-80 percent of the U.S. production of red tart cherries. The major variety grown in the United States is the Montmorency. It has been cultivated in the United States for more than a century because the fruit is excellent for pies, preserves, jellies, juices and other products. Red tart cherries generally are frozen or canned immediately after harvest and are primarily used as a food ingredient. Cherries have a rich-red color and tangy flavor. They are low in fat, calories and sodium and high in vitamin A, anthocyanins and antioxidants. At the Cherry Marketing Institute (CMI), the staff continues to work with manufacturers and marketers to expand the use of red tart cherries in non-traditional markets.

New this year is an effort to develop a cherry paste, which has wide applications in the ingredient business. Nielsen numbers indicate that the breakfast bar business is a \$200 million category. Breakfast bars utilize fruit paste products as the primary ingredient. Most manufacturers today do not offer a

cherry bar. CMI is working closely with Michigan State University Food Science Department to change all this.

Cherry paste has a great red color with a fantastic, exciting, tangy flavor. It will utilize late season fruit that is generally high in sugar solids and because its final form is ground, the industry will be able to efficiently remove pits and guarantee pit-free product. Best of all, cherry paste will not compete with the current customer base that purchases cherries on an annual basis.

Phil Korson of CMI said, "We are very excited about marketing cherry paste as a fat substitute and see new markets in the school lunch program, as well as applications in cookies and breakfast bars. It is a great line extension for the companies that are currently marketing fruit paste products as well as a value-added product that should increase both grower and processor returns."

If you have any questions, feel free to contact Phil Korson at the CMI at 669-4264. ■

### Minnesota: A Snowflake harvest

Scattered among the familiar sugar beets, potatoes and soybeans are bright green tops more at home in a backyard garden. But here they are, covering 5 to 15 acres at a stretch, rooted in the rich Red River Valley soil of northwestern Minnesota — carrots, thousands upon thousands of them, maturing under the August sun.

To package the nontraditional harvest, members of Snowflake Vegetable Cooperative, a new venture, installed carrot sorting and washing equipment in an Oslo warehouse this summer. The phone in Snowflake headquarters rings with vegetable brokers who have just received samples of the new crop.

"The brokers say our carrots are a quality product," says Snowflake Manager Bryan Green, who, like the commercial carrot venture he's marketing, is a California transplant.

#### Profit is the carrot

Why carrots, when sugar beets have been so successful? It's a question that might have been asked about beets when co-ops such as American Crystal were being organized, and the answer is similar: return per acre. Green says growers can expect a new return of about \$800 per acre. Test plots have shown valley growers they can produce 18,000 pounds or more per acre.

#### Savings and sweet taste

While there's no shortage of carrots in local grocery stores, Snowflake hopes to capitalize on its location. Because its sweeter, fresher carrots are closer to markets such as Minneapolis-St. Paul and Chicago, the co-op's "Snow Picked Farms" brand can be shipped for much less than carrots imported from California.

"It really pays to buy regionally," Green says.

The freight on a load going to Chicago "would save about \$2 per master bag (50 pounds)" over a bag shipped from the West Coast. Growers in Texas and Florida have successfully promoted their carrots based on freight savings, Green says, and Snowflake can offer even more savings.

The cooperative has designed a label that invites consumers to "Taste the Sweetness," with an emphasis on carrots "fresh from the Red River Valley."

#### Packing a risk

Snowflake's 17,000-square-foot processing plant employs 50 people under the direction of Carol Cachu, who has 14 years of experience in the industry.

In the plant, harvested carrots are washed, then weighed to determine each grower's total. Sorting machines divide carrots by size and diameter; similar-sized carrots are bagged in 1,2,3,5 and 25-pound bags with colored labels identifying different sizes. Jumbo carrots are packed in 25 and 50-pound containers; broken or undersize carrots go to processors who make carrot sticks and salads, eliminating waste.

Outside the plant, a water filtration system separates most of the soil from the carrot-washing operation before the water enters the city's treatment system. Inside, temperature-controlled bins allow the cooperative to store fresh carrots all fall and winter.

All this equipment required a hefty investment, and funding has come from several sources, Green says. In addition to the growers' investment, Snowflake got started with loans and grants from the Northwest Minnesota Initiative Fund, the Northwest Regional Development Commission, Valley State Bank in Oslo, the Argyle State Bank, the St. Paul Bank for Cooperatives, and Ag Utilization and Research Initiative. ■

Co-op activity in the Northern Plains • Co-op activity in the Northern Plains • Co-op activity in the Northern Plains

### Today's farmers strive to survive

#### New-age cooperatives help bring money back to the farm

By Jane Braxton Little,  
American News Service

When farmers want to lend each other a hand in Renville County, Minn., they don't just get together to raise a barn. They build a factory to process beets into sugar, or alfalfa into high-fiber livestock feed, or corn into ethanol fuel.

In a movement dubbed "co-op fever," small-farm owners throughout the Midwest are joining together to develop ambitious new uses for the crops they have traditionally produced. In the process, they are keeping profits and jobs at home and rebuilding their communities.

"We had to change or lose everything," says Barb Frank, a third-generation Renville, Minn. farmer.

#### Making a decent wage

Four years ago, Frank and her husband were raising corn, beans and chickens in a struggle to make ends meet. Neither the crops nor their 80,000 starter pullets produced enough income to live on, she says.

When local farmers began organizing an egg marketing cooperative, Midwest Investors Inc., the Franks saw a glimmer of hope. They offered to provide all the hens for the new enterprise, and in return they agreed to sell only to the co-op. Joining the egg co-op ended up providing the Franks the living wage they had not been able to achieve just by farming their land, Frank says.

The Franks' business venture is one of hundreds negotiated between individual farmers and the cooperatives formed by groups of farmers in the last few years. Since the early 1990s, farmers have formed 65 co-ops in Minnesota, North Dakota and South Dakota.

With each farmer member investing an average of \$25,000, after five years the investments are worth \$2 billion in Minnesota and North Dakota alone, says Lee Egerstrom, a St. Paul journalist who has written two books about agricultural co-ops.

After two years as members of the co-op, the Frank family's income has increased — "dramatically," she says — and they have more free time. The Franks have hired several people and rented their corn and bean fields to a woman who didn't have enough land of her own to produce a decent income.

"All of us are in better positions than we were

before," Frank says.

#### Fueling the economy

The Franks venture is part of a wider rebirth of rural co-ops. The first wave, 75 years ago, created large enterprises that have since become household names — Land O' Lakes, Agway and SunKist, for example, consist of networks of local farm co-ops. Today, farmers are once again bringing innovations to the rural economy and banding together to capture more of the consumer dollar, Egerstrom says.

Corn farmers in Marshall, Minn., sell their raw product to themselves and turn it into high-fructose corn syrup and refined ethanol at plants they built and own cooperatively. Wheat farmers near Drayton, N.D., are marketing their grain as tortilla flour. A southern Minnesota beet sugar co-op produces beet pulp pellets as feed for cattle and sheep.

By processing their crops before shipping them out to market, farmers are increasing the value of their products. By sharing in the ownership of the processing plants, they are increasing individual profits.

The combination replaces farmers' dependence on the ups and downs of the world economy with a communal independence that makes them stakeholders in the marketplace, says Egerstrom.

"Instead of planting for a market dictated by national and international politics, they have created their own markets," he says.

#### Coming back to life

This new generation of cooperatives is in part a reaction to the consolidation of farm ownership, which has exacted a toll on farm communities and farmers, says Frank. Traditionally, the map of rural America was dotted with a myriad of small farms supporting many towns. But as farms got larger, with fewer family farmers, the towns got smaller.

"Renville was dying," says Frank Blackburn, a spokesman for the Minnesota Association of Cooperatives. "All the little Midwestern farm towns were dying. There weren't any jobs. The kids left town and they never came back."

The cooperative enterprise seeking to reverse the trend began with what seemed like yet another disaster. A sugar beet processing plant 90 miles away shut down suddenly in 1971, leaving Renville growers with no market. The farmers raised \$60 million and bought the company "lock, stock and barrel, including the brand name," says Blackburn. Success took time. During its first 10 years the

fledgling co-op struggled. Many members wanted out, says Francis "Butch" Buschette, a second-generation Renville farmer.

But persistence and an improved sugar market eventually paid off. In addition to pure beet sugar, the growers began producing beet molasses and betaine, a by-product with multiple industrial uses. By 1994, the sugar beet cooperative was employing 250 full-time workers and issued a \$10 million payroll.

The success of the sugar beet co-op inspired the Golden Oval, the Franks' egg-processing co-op, and dozens of other agricultural ventures. Several have yet to be tested.

#### Good for some

The new generation of cooperatives has given farmers greater security, says Egerstrom. Buying shares in a co-op carries many of the risks of planting seeds, but members of a co-op take the risk with others.

And that makes banks far more willing to loan them money, says Buschette. He cited a hired hand who asked for a loan to build a hog-farrowing barn. The banks turned him down. But when he asked for \$22,000 to join a co-op, they agreed.

"It scares some people," says Buschette, "and sure, it's a risk. But we've got to try something different."

#### Not everyone is enthusiastic about the new co-ops

Wayne Kelley, chairman of Minnesota Citizen Organizations Acting Together, fears they will do exactly what the co-ops say they are fighting. Cooperatives are continuing the trend of consolidating family farms in the hands of a few agribusinesses, says Kelley, because farmers who do not belong are at a disadvantage.

"If a co-op damages people who are not members, it's squeezing those people out. Some of us feel we need to stand our ground," he says.

But for Frank and her neighbors, the new-generation co-ops have revived dying communities and allowed farmers to stay on their family land.

"Farmers used to think they could make it on their own. Now they're finding out they are a part of the world that's a community. They need each other. That's what these new co-ops are all about," she says.

Jane Braxton Little is a free-lance writer based in Plumas County, Calif. ■

### Cooperation is sweet business

#### American Crystal is growing

By Rona K. Johnson

The Red River Valley has become a hotbed of activity, especially since American Crystal Sugar Co.'s sugar beet harvest started.

But the sugar processing co-op has been a hotbed of activity since 1973 when Valley sugar beet growers purchased American Crystal. Since then, the co-op has more than doubled in production and size and branched out into other markets.

Not only has the co-op realized growth from its inception, it also experiences tremendous growth from year to year, depending on the size and quality of the sugar beet crop.

But American Crystal's job doesn't stop at producing, harvesting and processing sugar beets.

#### Sugar power

To market sugar more efficiently, American Crystal joined forces with Minn-Dak Farmers Cooperative in Wahpeton, N.D., and Southern Minnesota Beet Sugar Cooperative in Renville, Minn.

That union created United Sugars, Crystal's sugar marketing arm headquartered in Minneapolis. United Sugars in 1995 marketed 28.7 million hundred-pound bags of sugar capturing 16.4 percent of the U.S. sugar market to make it the third largest sugar marketer in the United States.

Daniel McCarty, president and CEO of American Crystal, says the three players that make up United Sugars already own a lion's share of the Chicago sugar market. Crystal plans to expand that base.

"We're always looking for potential partners to bring into the United Sugars fold," McCarty says. "We will try to bring more players in to expand our market and expand our geography."

#### Getting sweeter

American Crystal decided to expand its product base to offer its customers high fructose corn syrup, which is used in products such as pop.

To enter this market, American Crystal committed \$48 million to build a \$260 million corn wet milling facility in Wahpeton, N.D., called ProGold.

#### American Crystal has a 46 percent interest in ProGold.

"I think with ProGold the first priority is to get it up, running and breaking even," McCarty says. "Right now it's in the investment mode. Beyond that I see expansion of the product line as being a priority."

United Sugars has already begun marketing the high fructose corn syrup. Midwest Agri-Commodities will market the by-products.

Midwest Agri-Commodities, headquartered in Corte Madera, Calif. Is another of American Crystal's offshoots.

The business is located in California because most of the by-products are exported to Japan, McCarty says.

#### Expanding the base

The company markets American Crystal's, Minn-Dak's and southern Minnesota's sugar processing by-products, such as sugar beet pulp, beet molasses and desugared molasses.

"The main initiative that they're charged with is making sure they sell all the by-products from the parent companies and to come up with more profitable uses for their products," McCarty says.

Midwest Agri-Commodities recently branched out by contracting with alfalfa producers in northwestern United States. They are now shipping alfalfa to Japan.

American Crystal also develops and markets sugar beet seed.

"We have an operation in the Portland, Ore., area that grows sugar beet seed, and we also develop our own proprietary varieties," McCarty said.

And if that wasn't enough, the co-op started work on a new marketing angle in an effort to sell all of the commodities its grower-members produce.

That led to the creation of a brand name "Farmer Direct - Grown, packaged and sold by farmers."

McCarty says it still has some tweaking to do to get the Farmer Direct label into the marketplace. ■

### Producers create first South Dakota soybean processing plant

Twenty-one hundred soybean producers combined their resources to create South Dakota's first soybean processing plant. The \$32.5 million facility, located six miles west of Brookings, allows area producers to process their own soybeans, ending their reliance on outside suppliers.

South Dakota Soybean Processors was the brainchild of soybean producer and board president Paul Casper, along with South Dakota producers Marvin Hope and Richard Negstad, from Volga; Dale Murphy, from White; Gerald Moe, from Arlington; Delbert Tschakert, from Florence; and Corey Schnabel, from Freeman.

Four years ago, the group decided producers in eastern South Dakota needed a plant to process their soybeans in their own area, an economical alternative to shipping the soybeans out of state to be processed into meal and then shipping the processed meal back to be used in manufacturing livestock feed.

South Dakota producers, who feed their livestock about 400,000 tons of bean meal each year, were paying \$10 to \$15 a ton for the return shipment of their processed soybean products. To compound matters, they were receiving 75 cents below the basis price listed at the Chicago Board of Trade. "That's a considerable loss when you consider that we'll produce 95 million bushels of soybeans in South Dakota this year," Casper said.

And what better way for these South Dakota producers to improve their profits than to take control of the processing and marketing of their own commodities? "This is the cooperative philoso-

phy and the system message," Casper said. "This is what our plant is all about."

#### Building the dream

To gain support for the soybean plant, Casper and his group spent two years holding producer meetings across South Dakota and Minnesota. More than 7,000 farmers participated.

"Thanks to strong support from the producers, we wrote our own bylaws in 1994 and started raising money in 1995," said Casper, who farms 4,500 acres near Lake Preston with his father. "Twenty-one hundred producers in South Dakota and Minnesota invested \$21 million to build the plant."

Construction of the facility began in August of 1995. On October 6, the plant processed its first load of soybeans.

An estimated 55,000 trucks will enter the plant each year, bringing soybeans from South Dakota and Minnesota, with smaller deliveries from North Dakota and Iowa. In its first year of operation, the plant is expected to process 15 million bushels of soybeans.

"It has taken a lot of dedication on everyone's part to make something this big happen," Casper said. "You can dream a dream, but with hard work, dreams do indeed come true — I think we proved that."

#### Securing the future

To ensure a viable future for their plant, the 21 producer-owners who comprise the South Dakota Soybean Processors board of directors have hired what Casper calls "a top-notch team of professionals."

That expertise begins at the top, with Chief Executive Officer Rodney G. Christianson, who

comes to Volga with 20 years experience in the grain business, 14 of which were in oil seed processing.

When it reaches capacity, the Volga plant will process 50,000 bushels of soybeans a day into 1,250 tons of crude meal.

Christianson said, "Our primary market area for the soybean meal is South Dakota, followed by Canada and the Pacific Northwest. This year, we will produce nearly 90 percent of the soybean meal needed by South Dakota livestock producers."

At capacity, the plant will also process 265 tons of unrefined soy oil. This oil will be shipped to two soy oil refineries in Mankato, Minn., where it will be further processed into edible oil. Christianson described the Volga plant's estimated annual soy oil production as filling 150 million, one-pound bottles of consumer cooking oil.

#### Reaping the benefits

The Volga-Brookings community has benefited tremendously from the new plant, with a \$50 million economic impact in the last year of construction activity alone. Christianson said, "On an ongoing basis, the economic benefit to the community will be \$12 to \$14 million per year."

Christianson cited this project as one of the most exciting events of his professional career. "I have a great deal of admiration and respect for the producers who envisioned this plant and carried out their dream."

"I am confident that our highly qualified, professional staff will meet the expectations of the farmer-owners who put this co-op together. We'll see to it that the dream lives on," Christianson said. ■

### Surfing the New-Wave cooperatives

The St. Paul Pioneer Press of Aug. 9, 1994, listed 50 new-wave and community development cooperative ventures in Minnesota, North Dakota and Wisconsin, noting that plans were being studied for another 50 or more. They ranged from dairy, pork, corn, pasta, potato and vegetable to other production, processing and marketing cooperatives. The St. Paul Bank has helped finance many of them. Most have been, or are being, formed to move the producer one or more steps up the food chain and one or more steps closer to the consumer of agricultural products. These cooperatives raise the value of local farm commodities and natural resources, provide rural development and income opportunities and help stabilize the rural communities that foster them.

Some of these new cooperatives reach out horizontally to produce new crops and products, benefiting communities through economic diversification. Some reach vertically, creating new jobs in communities and bringing producers a share of the proceeds from the processing of their products.

Cooperatives are sensitive to the business conditions of an area and the needs of its people. They bring together people capital, business functions and services in effective, competitive economic units under local ownership and control. They are created and serve to fill an economic function and purpose.

Economics prompted the Rochdale weavers to initiate the cooperative form of business we know today. Economics fostered formation of cooperatives in the 1920s and 1930s. But in later years this fundamental purpose — serving an economic need — sometimes was lost or overlooked.

From the 1950s through the 1970s, lack of economic performance by some cooperatives was often rationalized as a result of lack of cooperative education and understanding. Education and understanding have their roles, but the real name of the game is economics. A cooperative's success or failure depends on how well it performs its economic purpose.

The rise of new cooperatives in the Upper Midwest that began with sugar cooperatives in the early 1970s has become a virtual explosion. New cooperatives for processing and/or marketing grains, oilseeds, wild rice, potatoes and fruit came along during the mid to late 1970s. The 1980s brought further expansion and new cooperatives for such ventures as processing corn, marketing wine and providing financial services.

The 1990s have already brought new cooperatives to deal with alfalfa, aquaculture, bison, new and expanded processing of corn into fructose and ethanol, flour milling, frozen bread dough, ostriches, pasta, potatoes, poultry and egg production, sugar beet processing, senior housing, sweetener marketing, vegetable processing and more.

The resurgence of cooperatives (at least as we know them in the Upper Midwest) in the late 1980s and in the 1990s has been driven by economics, pure and simple. Opportunities are great, but successful new cooperative ventures do not spring up overnight. Large amounts of due diligence, time and hard work precede the startup of operations.

#### Characteristics of successful new-wave cooperatives:

- Value-added investment orientation to process commodities into higher-value products, moving producers further up the food chain
- Significant out-of-pocket investment by members to provide the initial equity
- Defined or selected membership rather than open membership
- Long-term delivery rights and obligations of a specific commodity, with investment level tied to delivery rights
- Recognition that delivery or membership rights have value and can be traded
- Pooling of commodities and products with value-added payments to the members only as they are earned
- Expansion typically funded by new investment related to the additional delivery or membership rights

■ More frequent use of joint ventures and alliances.

#### Success factors for New Cooperative Ventures:

- Local leadership — Cooperatives are successful if they're created "from the ground up." This requires local leadership with the vision, spirit, time and commitment to develop the idea, solicit the support and create the new organization.
- Realistic goals and assumptions — Objectives of the new organization must be achievable.
- Honest, open communications — All involved stakeholders must have a clear understanding of what is expected and how it is to be achieved.
- Realistic market-entry strategies — Marketing the finished product is a major challenge for all cooperatives. For a new player entering an established market, the ability to market the end product successfully is critical to success.
- Experienced consultants — New-wave co-ops require experienced outside resources for the due-diligence process — attorneys, accountants, lenders and knowledgeable industry experts who can develop reasonable and appropriate organizational structures and business and financial plans.
- Comprehensive business plan — A business plan that addresses challenges and opportunities is critical in demonstrating potential for the project, determining required capital, raising equity capital and securing needed debt financing.
- Engineering and design — Many new-wave ventures are based on technology to process raw commodities into value-added products. Plant design and engineering are critical to successful plant operation and to production of quality products.
- Capable management — Management must be capable of successfully implementing and managing a sound, comprehensive business plan.
- Sufficient member equity — Owners will benefit most from success and must bear the risk. Equity capital from members must be sufficient to attract debt financing to support the entire business, especially through start-up operations. Depending on the risk analysis, a 40- to 50-percent member equity position is often specified for new cooperatives.
- Commitment to pooling — New ventures are generally structured so that members are paid on a progressive basis as the crop is received, processed, and — most important of all — marketed.

#### Successful strategies of traditional cooperatives

- Providing new services — As agriculture has adopted new technologies and become more specialized, producers seek additional services. Plant food and crop protection applications, crop monitoring, livestock production services and credit are examples.
  - Increasing market share — In some cases, traditional cooperatives have increased market share through new product development, mergers and consolidations with other cooperatives and acquisition of non-cooperative businesses.
  - Vertical integration — This strategy has often succeeded in livestock production where traditional cooperatives support production facilities in hog, poultry and cattle production. Traditional dairy and grain-marketing cooperatives have diversified and expanded through additional value-added processing marketing ventures.
  - Adding value and diversification — The traditional cooperatives have created new organizations, including new cooperatives, joint ventures and strategic alliances. They also have added services to meet the needs of rural America, such as energy production and distribution, telecommunications and information services.
- The new-wave cooperatives embody the principles of the Rochdale weavers established more than 150 years ago but modified to function successfully today. They are based on the successes of traditional cooperatives and the experience of the new-wave cooperative ventures. They are serving well in rural America and may fill a need in your community. ■

### Organizing steps

Starting a cooperative is a complex project. A small group of prospective members discuss a common need and develop an idea of how to fulfill it. Depending on the situation generating the idea, a new cooperative may be welcomed with enthusiasm or may be met with vigorous competitive opposition.

If opposed, leaders must be prepared to react to various strategies of competitors, such as price changes to retain potential cooperative members' business; better contract terms or canceled contracts attempting to influence lenders against providing credit; and even publicity, misstatements, and rumors attacking the cooperative business concept.

Regardless of the business climate for the proposed cooperative, leaders must demonstrate a combination of expertise, enthusiasm, practicality, dedication, and determination to see that the project is completed.

Figure 1 summarizes the sequence of events leading to the formation of a cooperative.

#### Leadership and advisors

Responsibility rests mostly with the leadership group. Leaders begin by discussing their idea at one or more small group meetings with other prospective members or users. If the group supports the idea, the next step is to seek the advice of someone familiar with cooperatives.

Specialized help is needed throughout the various stages of starting a cooperative. Leaders need someone familiar with the cooperative-forming process to work with them step by step concerning legal, economic, and financial aspects.

Business and cooperative specialists are needed. Most states have rural development offices and many have a cooperative development specialist on the staff who can help you get started.

Other resource people are available from county Extension Service offices or land-grant universities, state cooperative councils, Centers for Cooperatives, National Cooperative Bank, area offices of CoBank, St. Paul Bank of Cooperatives, or an established cooperative in your area.

Legal counsel, preferably an attorney familiar with State cooperative statutes, is needed. Among sources to check for one are state Extension specialists working with cooperatives, the state cooperative council, CoBank, St. Paul Bank for Cooperatives, National Cooperative Bank, National Society of Cooperative Accountants, USDA's Cooperative Services, or an established cooperative in the area.

An attorney prepares the organization papers or checks the legality of those written by someone else.

Early expertise is needed to acquire property, make capitalization plans, borrow money, and write agreements and contracts. Even after the cooperative is operating, an attorney should be retained who can help ensure the organization conforms to applicable laws.

Counsel from a financial institution can provide advice on designing the feasibility study to meet requirements of a lending agent. Staff specialists on finance and accounting matters can also advise the cooperative. An independent accounting firm that has the knowledge of cooperative operations should be hired to establish the bookkeeping system, tax records, and a plan for revolving capital prior to sale of stock or collection or handling of members' money. Later, the board will need to hire an outside accounting firm to conduct the annual audit.

Technical advice may be needed periodically from a variety of technicians and persons experienced in cooperative business operations.

#### Figure 1 - Sequence of events outline

- Invite leading potential member-users to meet and discuss issues. Identify the economic need a cooperative might fill.
- Conduct an exploratory meeting with potential member-users. If the group votes to continue, select a steering committee.
- Survey prospective members to determine the potential use of a cooperative.
- Discuss survey results at a second general meeting of all potential members and vote on whether to proceed.
- Conduct a needs or use cost analysis.
- Discuss results of the cost analysis at a third general meeting. Vote by secret ballot on whether to proceed.
- Conduct a feasibility analysis and develop a business plan.
- Present results of the feasibility analysis at the fourth general meeting. If participants agree to proceed, decide whether to keep or change the steering committee members.
- Prepare legal papers and incorporate. Call a meeting of charter members and all potential members to review and adopt the proposed bylaws. Elect a board of directors.
- Convene the first meeting of the board and elect officers. Assign responsibilities to implement the business plan.
- Conduct a membership drive.
- Acquire capital and develop a loan application package.
- Hire the manager.
- Acquire facilities.
- Begin operations. ■

### Potential pitfalls for new co-ops

A word of caution may be appropriate in the midst of all of the enthusiasm. Combining the cooperative form of business organization with the concept of adding value to farm products through further processing is NOT an automatic formula for success.

These kind of projects can work well, but they can also fail. They can be done right, but they can also be done wrong.

Below is a list of ten potential pitfalls that new cooperatives should avoid.

1. **Lack of a clearly identified mission**  
A new cooperative should not be formed just for the sake of forming a cooperative. Instead, it should be formed to achieve specific goals, and to accomplish a mission that has been clearly identified and accepted by its members.
2. **Inadequate planning**  
Even after a mission and goals have been identified and accepted, detailed plans must be developed for achieving the goals and accomplishing the mission.
3. **Failure to use advisors and consultants**  
It is essential for a new cooperative to assemble a team of competent advisors and consultants.
4. **Lack of member leadership**  
It is best if the leadership comes from within the group, rather than from outside the group.
5. **Lack of member commitment**  
If the new venture is to succeed, it must have a broad base of support among its members.
6. **Inadequate management**  
Choosing a manager, establishing the goals that the manager should be working to achieve, and supervising the manager during the process of achieving those goals are some of the most important functions of a cooperative's board of directors.
7. **Failure to identify and minimize risks**  
New ventures are inherently risky. Risk cannot be eliminated entirely, but it can be minimized to some extent, once identified.
8. **Overly optimistic assumptions**  
Care must be taken not to "oversell" a new venture with overly optimistic assumptions and speculative promises of enormous future profits.
9. **Not enough money**  
It almost always costs more than originally anticipated to get a new business venture up and running. Be sure that the cooperative's financing package is adequate.
10. **Inadequate communication**  
Communication is critical while forming a new cooperative, and also during all of the years of its existence. ■

#### For more information:

MSU Extension  
Contact your local Extension office.

Michigan Farm Bureau  
Bob Boehm, Manager, Field Crops Dept.  
(517) 323-7000, ext. 2023 • Fax: (517) 323-6541

Corn Marketing Program of Michigan  
Keith Muxlow, Executive Director  
(517) 323-6600 • Fax: (517) 323-6601

Michigan Department of Agriculture  
Robert Craig, Director, Office of Agriculture Development  
(517) 335-3403 • Fax: (517) 335-1423

Michigan Soybean Promotion Committee  
Keith Reinholdt, Executive Director  
(517) 652-3294 • Fax: (517) 652-3296

Agricultural Alliance for Gratiot - Montcalm Renaissance Zone  
Don Schurr, Co-chair (517) 875-2083  
Franz Mogdis, Co-chair (517) 831-5261

USDA/Rural Development Agency  
Jason Church, Commercial Loan Specialist  
(517) 337-6736, ext. 1224 • Fax: (517) 337-6770