Understanding and Responding to the Changing Needs of Maryland Agriculture

A Toolkit for Local Communities

May 2011

Governor's Intergovernmental Commission for Agriculture

MARYLAND
Smart, Green & Growing

Background

This toolkit is a product of the Governor's Intergovernmental Commission for Agriculture (GICA). GICA is a public-private coordinating body that works to promote the economic profitability of agriculture in the state by ensuring that all appropriate state agencies work in a cooperative, coordinated manner with local government and industry groups in planning, implementing, overseeing and evaluating intergovernmental initiatives related to agricultural affairs of the state.

GICA is staffed by the Maryland Department of Agriculture (MDA). In late 2006, the Maryland Agricultural Commission developed Maryland's statewide Plan for Agricultural Policy and Resource Management. This plan outlined some of the issues important to Maryland agriculture and tasked GICA with the implementation of certain aspects of the plan. GICA is attempting to address a number of the issues identified in the Statewide Plan, one of which is to promote understanding of Maryland agriculture.

This toolkit aims to provide local communities and officials with a basic understanding of the current state of Maryland agriculture. It suggests tools, methods, and resources that will help farmers, their neighbors, and local officials to better work together towards creating communities that support both profitable agricultural production and a high quality of life. It also includes a variety of resources and information available to communities.

Helpful Links

Statewide Strategic Plan:
www.mda.state.md.us/news_room/agforum.php

GICA website:
www.mda.state.md.us/boards_comms/gica.php

Maryland Agricultural Commission:
www.mda.state.md.us/boards_comms/md_ag_commission.php

Maryland Department of Agriculture Staff Directory:
www.mda.state.md.us/about_mda/staff_dir/index.php

For more information, contact:

Maryland Department of Agriculture
Wayne A. Cawley, Jr. Building
50 Harry S. Truman Parkway
Annapolis, MD 21401-7080
Baltimore/Annapolis: (410) 841-5700
Washington Metro Area: (301) 261-8106
MD Relay Service (TTY Users): (800) 735-2258
Toll Free: (800) 492-5590
Fax: (410) 841-5914
Website: **www.mda.state.md.us**

With Our Thanks…

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Large front page photo by David Ball.

Executive Summary

This toolkit is a product of the Governor's Intergovernmental Commission for Agriculture (GICA), which provides a public-private and interagency forum to address agricultural issues in the state. As part of its ongoing efforts, GICA is providing this toolkit to provide a basis of understanding for communities on issues affecting Maryland agriculture. A brief outline of the toolkit's contents, as well as a summary of what is discussed in each section, follows below:

Section 1.
Top Issues Facing Maryland Agriculture

Several issues impact Maryland farmers and their ability to produce products competitively. First, increased global competition and access to markets are major concerns for many farmers. Without robust regional processing and distribution capacity, many farmers have trouble efficiently and competitively getting their products into conventional wholesale and retail markets. Another issue of concern for farmers is environmental adaptation, with a variety of new methodologies, technologies, and organizations involved. Farmers have made tremendous progress, yet are plagued by uncertainty regarding potential new regulations.

The loss of farmland has greatly impacted Maryland farmers, creating conflicts with neighbors, higher costs, and sometimes economic isolation for those remaining farmers severed from agricultural corridors. The availability of labor is also a main concern for farmers, leaving them to rely upon the federal H-2A program, which is cumbersome and expensive to use, especially in light of labor costs elsewhere in the world. As wildlife populations have grown tremendously in some parts of the state, crop damage and environmental degradation from animals is also an ongoing concern for many farmers. Another concern for farmers is the sometimes unstable price they receive for their products, with farmers having little ability to influence it. These concerns also extend to prices for input commodities used in production, such as fuel, fertilizer, feed grains, and other necessary inputs.

Section 2.
Farmer Responses to Changes

As agriculture has changed, Maryland farmers have shown great resiliency in finding ways to adapt. Agriculture in the state continues to be a viable industry, with producers remaining competitive through a number of different means. Farmers have also diversified their agricultural products, which can hedge against primary farm products or be a stand-alone business strategy. Diversification activities can include production of niche products such as jams and honey, while other farms have become involved with agritourism, winemaking, and organic production. Farmers have also looked to create value for their products through on-farm processing, which is also often accompanied by marketing those products directly to consumers.

The sale of land has also been an unfortunate reality for a variety of reasons, including to settle debts and estate taxes, and/or to fund retirements if family members are not prepared to take over farming operations. Alternative energy production is also garnering interest as a means of cutting down on on-farm energy costs. Many of these changes to on-farm operations also require changes to the farm's infrastructure, with new facilities, equipment, and methodologies becoming part of the rural landscape.

Section 3.
Tools for Problem Solving

Although confronting a number of issues, Maryland's farmers have found ways to adapt and there are a number of ways that communities can help. If properly supported, Maryland producers can compete with agricultural producers anywhere in the world. Perhaps the most important thing that Marylanders can do is to seek to understand the importance and significance of agriculture in the state. As an economic engine, Maryland's food and fiber sector supports 14 percent of the state's workforce. Moreover, Maryland agriculture plays a central role in ensuring our food security. However, what is lacking is a robust regional

food processing and distribution system, which communities can encourage in a number of ways described in this section. Local governments can play a vital role in conserving our natural resources, which includes smarter planning that preserves enough contiguous farmland to ensure agricultural corridors where food and fiber production remain viable.

Communities can directly help farmers by ensuring that high crop yields do not succumb to wildlife damage. In developing county-wide wildlife management plans, communities can both help farmers and protect sensitive environmental areas. Marylanders can also help support local agriculture by working to ensure a level playing field for our farmers with regards to environmental and other regulations. Rules that are adopted without examining the potential impact on competitiveness could disadvantage our farmers against farmers elsewhere. It is important to include the agricultural community in any discussion of potential local and environmental regulations.

As many farms are looking to on-farm processing as a means to add value to their products, communities should seek to understand these activities and the economic impact they can have. On-farm processing benefits farmers, related businesses, the local tax base, and is an important step in establishing a vibrant local foods system. Communities can support these activities by helping facilitate permitting, financing, and technical assistance arrangements. Food safety is another area that local officials should familiarize themselves with, as helping farmers understand a complex regulatory environment can pay dividends in promoting small-scale, on-farm food processors. Similarly, local governments can help farmers by finding ways to facilitate the permitting and building of affordable workforce housing.

As development has brought new residents into closer contact with working farms, it is necessary for communities to find ways to promote amicable relationships with new neighbors. A number of tools exist that can help, including realtor disclosure requirements to help manage expectations, reverse setback requirements for new developments, and facilitated meeting and meditation services, which can help promote dialogue and mutual understanding. Counties should also re-examine their "right to farm" and local zoning ordinances to ensure they are up to date with the new agricultural activities that have become a part of Maryland farming. Finally, counties should promote outreach and education to encourage dialogue and understanding amongst farmers, local officials, non-profit organizations, and neighbors. Clear communication, comprehension, and collaboration regarding the emerging issues surrounding Maryland agriculture, will benefit the Mid-Atlantic region's farmers, consumers, and communities.

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Introduction

Agriculture is the state's oldest economic engine and one of the few industries that still produces and exports products outside of the state and around the world, exporting almost $450 million of products in 2009. It is one of the purest and most viable forms of value creation, as raw materials are transformed into high-value protein, fiber, and energy sources for humans, animals, and machinery, with obvious demand. Today, roughly one-third of Maryland is made up of farmland, with the state having some of the most productive farms nationwide, yielding one of the highest dollar values per acre of farmland in the country. Agriculture also employs large numbers of people, with 14 percent of the state's workforce engaged in Maryland's food and fiber sector.

Maryland's agriculture is a $1.8 billion industry with an economic impact that reaches far beyond farms. Economists estimate that the economic development and jobs associated with agricultural production and processing can have an economic multiplier effect of between 5 and 7, supporting businesses such as those that produce machinery and parts, process animal feeds, and construct buildings. Maryland farmers also support a variety of high tech companies, including those that develop computer equipment and products such as the Global Positioning Systems and Geographic Information Systems used in precision agriculture, fertilizers, pesticides and herbicides, plant and animal genetics labs, and animal pharmaceutical companies to name a few. Maryland has a history as one of the main food production regions during the country's early history, due to its ability to produce a wide variety of agricultural products. This history continues today, as the state is the nation's 7th largest producer of chickens used for meat. Agriculture is also a dynamic industry that is making new inroads into markets such as wine, potatoes, and other specialty crops, and is home to a growing number of enterprises that are principally operated by women (17 percent).

Earl F. Hance

Secretary,
Maryland Department of Agriculture

Chair,
Governor's Intergovernmental
Commission for Agriculture

This report lays out some of the top issues facing our farmers and how farmers have adapted. Finally, it will suggest potential solutions that communities and local officials can use to help support their farmers and the contact information for the relevant agencies and organizations that can be of assistance. With strong community support, Maryland agriculture can compete with agricultural producers anywhere in the world. The goal of the toolkit is to help communities understand how they can continue to support the needs of their farmers.

Section 1.
Top Issues Facing Maryland Agriculture

Although a viable industry in the state, Maryland's agricultural enterprises have come under increasing pressure from a variety of sources, leaving farmers struggling to keep operating their businesses at a profit, and communities conflicted over the issue of land use. This has created a challenge for communities to find solutions that are agreeable to all. It is important therefore that local communities are aware of some of the basic issues facing Maryland's farmers, in order to better understand the reasons for the changing face of Maryland agriculture. **Below is a discussion of some of the main issues currently facing Maryland's agricultural producers.**

Increased Competition & Access to Markets

Although in close proximity to large numbers of consumers, many Maryland farmers, especially growers of vegetables and fruits, face steep competition at grocery stores with foods that may have been grown thousands of miles away. Additionally, many local farmers have difficulty accessing those markets. On the demand side, consumers want a steady supply of a variety of foods year-round, regardless of the growing season. Maryland farmers will continue to face difficulty in accessing markets at prices that can compete with products from elsewhere that are transported here more efficiently.

The lack of a strong regional food distribution system also affects our food security, as we are dependent upon foods transported from long distances. In addition, a number of emerging environmental issues are unlikely to remain as favorable to those food producers and processors in the future, and hence to the many East Coast consumers that rely upon them for cheap foods. Therefore, for the sake of our ability to access affordable foods, it is especially important to ensure that the mid-Atlantic region both maintains its capacity for production agriculture, and promotes a regional food supply system.

Environmental Adaptation

Over the past few decades, Maryland's agricultural sector has been identified as a contributor of pollutants to the Chesapeake Bay, related to excess nutrients and sediment runoff from farmland. Maryland's farmers have been credited with reducing agricultural runoff at the same time that nutrient loads from certain other sectors have been increasing. The success in limiting nutrient loads has been accomplished by changing on-farm practices as well as by farmer participation in a number of federal and state conservation programs. However, despite these and many other voluntary practices that farmers have undertaken outside of government programs, it is likely that farmers will be asked to do more in coming years. Below are outlined some of the regulatory requirements, environmental activities, and conservation programs currently in place, as well as a discussion of how meeting the Environmental Protection Agency's (EPA) Total Maximum Daily Load (TMDL) nutrient allocation for Maryland might impact Maryland agriculture.

Agriculture and Nutrients

It is important to understand why excess nutrients on farmland are a problem and how nutrient levels become too high despite farmers' best efforts. As nutrients are necessary for plant growth, farmers must apply either commercial fertilizer or manure in adequate quantities. Both are input costs that farmers

Computerized nutrient application monitoring.
(Photo by MDA)

must either purchase or generate. It is in the farmer's best interest to apply only as much as is necessary, to cut down on expenses. Technologies such as Global Positioning System-enabled farm equipment and Geographic Information System mapping are used as nutrient management tools to ensure proper and efficient manure or fertilizer application. For those farms that may not be able to afford these kinds of investments, it is still essential for both monetary and resource conservation purposes to calculate efficient nutrient inputs, of which farmers are acutely aware.

A concern is in ensuring plant uptake year-round and balancing nitrogen and phosphorus levels in the soil. While crops readily soak up and use the nitrogen in manure, phosphorus quickly binds to mineral and soil particles, making it unavailable for plant uptake. As a result, phosphorus levels can build in the soil over a number of years and become a problem. This is the case in many fields where the long-term application of manure, prior to the implementation of modern manure management practices, has created high phosphorus levels. It should be noted however, that modern nutrient management techniques are addressing this problem.

If a crop cannot use all of the nutrients, and if high nutrient levels have built up over the years, then any fields susceptible to runoff can contribute nitrogen, phosphorus, and sediment to waterways. Another less-prevalent way that nutrients from farmland can find their way into waterways is if livestock and wildlife feeding on crops have direct unfettered access to streambeds, which may allow direct defecation into the waterway. Excess nutrients can contribute to algae blooms upon entering the Bay. When coupled with the overfishing, loss of habitat, and diseases that have impacted menhaden, oysters, and other of the Bay's natural filters, algae blooms can impact the dissolved oxygen needed for healthy water bodies.

For more information about nutrients and the Chesapeake Bay:

- www.chesapeakebay.net/nutrients.aspx?menuitem=14690

For more information about Precision Agriculture:

- www.mda.state.md.us/resource_conservation/trib_strategies/precision_ag.php

Regulatory Authority

The Maryland Department of the Environment (MDE) is responsible for investigating and enforcing state and EPA water quality regulations, while the Maryland Department of Agriculture's (MDA) Office of Resource Conservation and the local Soil Conservation Districts work with farmers to ensure that those regulations are being met. The Soil Conservation Districts of Maryland are a political subdivision of the state and help agricultural producers improve water quality through a number of local, state, and federal programs and technical assistance arrangements.

Upon receiving a report of a potential on-farm problem, MDE investigates (with MDA) and attempts to determine if any sources of pollution exist. An investigation may include site visits, conversations with the farm operator(s), and water quality testing. If an agricultural operation is found to be degrading a waterway, MDA and the local Soil Conservation District will work with the farmer to ensure correction of the problem. Further action may include fines and possible court action.

In addition to addressing potential sources of pollution, MDE, as required by the EPA, also has responsibility for Concentrated Animal Feeding Operations (CAFOs). CAFOs are agricultural enterprises where animals are kept and raised in confined situations, and are regulated by the EPA in order to ensure that any pollutants discharged do not reach waterways. These operations are treated as point-source contributors of nutrients along with municipal wastewater treatment plants and industrial plants. Inspections are conducted to ensure proper on-farm nutrient management practices, for which high standards must be met, and can cover any number of on-farm activities. As a result of the CAFO requirements, farmers work hard to ensure that they are managing their livestock operations properly.

For more information about environmental regulations. . .

- Farmers Guide to Environmental Permits: www.mda.state.md.us/pdf/farmpermitguide.pdf
- Maryland Department of Environment: www.mde.maryland.gov/
- Maryland Department of Agriculture's Office of Resource Conservation: www.mda.state.md.us/resource_conservation/index.php

For more information about soil conservation districts . . .

- Maryland Association of Soil Conservation Districts at: www.mascd.net. Or call: 410-956-5771
- Guide to Understanding Soil Conservation Districts: www.mda.state.md.us/pdf/Sunflwr_Bro_reprint-pr2.pdf

Nutrient Management Program

Maryland's Water Quality Improvement Act, passed in 1998, requires that each farm operator whose income grosses more than $2,500 annually or has 8,000 pounds or more of live animal weight have a Nutrient Management Plan and submit a yearly Implementation Report to MDA. Certified consultants are utilized by farmers to develop their plans based on that year's land usage. The program has resulted in less fertilizer being applied to farmers' fields, but can also create resource and time constraints on already thin operating budgets. As most farmers do not have the training and certification necessary to complete their own plans, they must outsource the work by either hiring a consultant or working with a local University of Maryland Extension office to develop the plan. Recent fiscal constraints have reduced planning resources in local Extension offices, leaving farmers having to purchase the services of consultants working in the private sector.

For more information about. . .

- Maryland Department of Agriculture Resource Conservation Nutrient Management: www.mda.state.md.us/resource_conservation/nutrient_management/index.php. Or call: 410-841-5959
- University of Maryland Cooperative Extension's nutrient management program: anmp.umd.edu/

Manure Utilization

Livestock and dairy operations have always been a large part of Maryland's rural economies and a ready supplier of valuable animal manure to neighboring agricultural operations. However, the practice of concentrating large numbers of animals to feed a growing

population has increased at the same time that farms and agricultural acres have decreased. This has meant more manure and in some areas of the state, fewer acres ready to receive it. For animal agriculture operators, they have had to find new ways of disposing of their manure if they are unable to sell it or use it on their own acreage, and new ways of storing it until it can be disposed of. For those poultry farms that are designated as CAFOs, regulations stipulate that manure can only be stored outside and uncovered for 14 days, although research is ongoing to develop new, environmentally sound alternatives for temporary field storage of poultry litter. However, animal manure is a valuable commodity and organic fertilizer for farmers. It is also sought after for alternative uses, as in the example of Perdue's $13 million investment in their Agri-Recycle program, which turns chicken litter into pelletized horticultural fertilizer.

Non-Governmental Environmental Groups

There are also a number of active non-governmental environmental organizations that work to protect the Bay through a variety of activities. However, certain activities undertaken by a few groups have introduced tension into an issue that is better served by cooperation. Such activities include the ongoing monitoring of agricultural operations, including downstream water testing of nearby tributaries, unannounced site visits, and aerial observation intended to identify potential problems on farms. Suspected sources of pollution are then reported to the EPA and MDE, and while the vast majority of these complaints are quickly resolved, in some cases this has not proved satisfactory to some groups who have followed up with legal action. Such actions have included lawsuits aimed at individual farmers and/or industry entities for perceived nutrient mismanagement.

While these organizations can and do serve an important purpose in maintaining the health of the Bay,

such tactics have concerned many farmers who work and live on their farms in fear that they and their families may be under surveillance. There is also great concern that their livelihoods might be threatened by lawsuits targeting normal farm practices that might be perceived as problematic. Animal rights groups also have engaged in comparable activities nationwide, meant to discredit animal agriculture. When taken together, and carried out in the absence of dialogue and mutual understanding, such activities may prove counterproductive to shared problem solving and stakeholder cooperation.

In contrast, there are good examples of environmental groups that are working in successful cooperation with the agricultural community. One such organization is the Chester River Association. This organization sees farmers as partners in the Bay cleanup effort and has achieved real results in helping facilitate the implementation of nutrient-limiting, Best Management Practices (BMPs) on farmland. By including farmers as members of the organization, this group encourages the type of dialogue and cooperation that is essential to problem solving and Bay restoration efforts.

For more information about . . .

- The Chester River Association:
  www.chesterriverassociation.org

Conservation in Practice

As research and information about effective conservation and farm management practices has become available, farmers have worked with academia and government agencies to adapt their on-farm operations. Farmers have voluntarily planted cover crops, grown vegetative buffer strips alongside waterways, planted crops according to land characteristics, limited land tillage and manure application, rotated crops, employed new technologies and soil conservation techniques, and found other ways to be responsible land stewards. Help is provided through Maryland's 24 local Soil Conservation Districts, who work with farmers to evaluate on-farm operations and recommend BMPs to improve water quality.

In addition to efforts undertaken by farmers on their own, MDA, along with federal and local governments, has worked to ensure that public funding is made available to help farmers transition to certain new methodologies and technologies. For example, in 1997, Maryland officials worked with USDA officials to create the first Conservation Reserve Enhancement Program (CREP) in the nation, providing incentives for farmers to install conservation practices on sensitive agricultural land. The program was created to help the state meet its goal of planting 600 miles of forest riparian buffer by 2010. Farmers embraced the program, which was so successful that this goal was reached more than eight years ahead of schedule. The program has been responsible for the restoration of more than 70,000 acres of riparian buffers through the planting of grasses and trees near waterways.

The USDA's latest Census of Agriculture (2007) indicates that farmers increased enrollment in conservation programs by 57 percent for farms and 48 percent for acreage between 2002 and 2007. In 2010, MDA certified the planting of a record 400,031 acres of winter grains in the Cover Crop Program, in which a record 1,577 farmers participated. This is 123 percent of the state's first two-year Bay milestone goals for cover crops and is only one of the many ways that farmers limit nutrients in the Bay. Federal and state cost-share programs as well as technical advice generated through a farm-tailored Soil Conservation and Water Quality Plan have also helped farmers to build manure storage facilities, purchase high-tech equipment used in precision agriculture, create natural sediment and nutrient filters, and undertake other activities that have had an impact in reducing soil

Farmers increased enrollment in conservation programs by 57 percent for farms and 48 percent for acreage between 2002 and 2007. In 2010, the Maryland Department of Agriculture certified the planting of a record 400,031 acres of winter grains in the cover crop program, in which a record 1,577 farmers participated. This is 123 percent of the state's first two-year Bay milestone goals for cover crops and is one way farmers limit nutrients to the Chesapeake Bay.

erosion and runoff to the Bay and its tributaries. At the same time, new ideas for sustainability are continually being tried, in conservation practices contributing to agriculture's status as one of the United State's most dynamic industries.

For more information about conservation in practice. . .

- MDA Resource Conservation: www.mda.state.md.us/resource_conservation/trib_strategies/scwqpi.php
- Guide to Soil Conservation and Water Quality Plans: www.mda.state.md.us/pdf/scwqplan.pdf
- Guide to Best Management Practices: www.mda.state.md.us/pdf/ConsumerChoices.pdf
- Maryland Association of Soil Conservation Districts at: www.mascd.net. Or call: 410-956-5771
- Guide to better understand Soil Conservation Districts: www.mda.state.md.us/pdf/Sunflwr_Bro_reprint-pr2.pdf
- To find your county's Soil Conservation District: www.mda.state.md.us/resource_conservation/technical_assistance/index.php

Sustainability as Good Business: The Success of Voluntary Conservation Practices

Part of the success of the increasing implementation of conservation practices in recent years is due to the growing realization that many Best Management Practices (BMPs) are not only environmentally beneficial, but also make good economic sense. It is important to recognize this voluntary adoption of BMPs, especially in light of pressure from some sectors for mandatory BMP requirements. The planting of certain cover crops can benefit farmers' primary cash crops by "fixing" nitrogen from the air and making it available for plant use, thereby decreasing the need for nitrogen provided through fertilizer or manure.

Cover crops can also prevent the growth of weeds, and in some cases, the prevalence of insects, thereby limiting the need for expensive herbicides and pesticides. Additionally, the increased organic matter and benefits to microorganisms that result from cover crops and other soil conservation techniques improves soil quality and quantity, and eventually, crop yields. The practice of no-till or limited soil tillage is a way to reduce energy costs by limiting equipment usage.

As the economic benefits of many BMPs has become clear, the implementation of these and other BMPs are increasingly being used by a growing number of farmers of their own accord. Whether used to decrease dependence upon expensive petroleum-based fuels and fertilizers and/or unpredictably-priced input commodities, to improve soil quality, or as part of a cost-share program, environmental sustainability is being adopted as a business model. The voluntary adoption of BMPs is a significant factor in the agricultural sector's decreasing nutrient contributions to the Chesapeake Bay watershed. When considering the rapid progress that is already being made, any calls for mandatory BMP requirements are of questionable necessity and potentially burdensome for farmers.

TMDL Implementation

As Maryland moves forward in seeking to limit its nutrient contributions under the EPA's Total Maximum Daily Load (TMDL) "pollution diet", its farmers must have the tools necessary to help achieve these results. Meeting strict nutrient quotas for agriculture within a short time frame will mean the adoption of increasingly expensive BMPs, as many of the most cost effective BMPs are in large part already being done. This could drive up the costs of agricultural production, making it harder for Maryland farmers to compete with agricultural producers elsewhere that do not have similar constraints.

Implementing more BMPs will require additional public-private cost-sharing and technical assistance arrangements that go beyond what is currently in place. Support will be crucial, and there is concern in the farming community regarding the availability of the technical and financial resources necessary to meet the tightening standards.

There is also uncertainty in the agricultural community about potential regulations related to air emissions like methane or dust. Similarly, there are questions of whether existing Clean Water Act regulations might be tightened, and/or authority broadened. Such scenarios could affect Maryland farmers, who like any other business owners, need certainty to effectively plan and invest for the future at the same time that they need a level playing field with farmers elsewhere.

For more information about MDA's Office of Resource Conservation: www.mda.state.md.us/resource_conservation/index.php

Loss of Farmland

The fast pace of development in Maryland over the past several decades has meant that an increasing amount of fertile farmland has been converted to other uses. Many farmers (or their children) who no longer see the farm as a viable business venture (or who need to settle estate taxes or other debts), have sold farmland to developers. The resulting development has transformed traditionally farm-based communities into highly populated areas where residential, commercial, and other uses can conflict with the existing farm operations.

Conflicts with Neighbors

The close proximity of new residential development and agricultural operations may confront newcomers to the area with issues that they had not expected when they purchased their new home. One such issue is the increased vehicle traffic that can conflict with farmers operating slow moving farm vehicles or who regularly move animals across roads. As many farmers rent the lands that they farm, it is necessary for them to move large machinery from one property to another, an activity that can occur frequently depending upon the agricultural commodity being produced. Newer neighbors also may not be ready for the smells, noises, and dust associated with working farms, especially if the home purchase occurred outside of the growing season. Many of these conflicts arise due to unrealistic expectations as to what living in rural agricultural areas is like, which in turn can often be traced to unfamiliarity with production agriculture.

Higher Costs for Farmers

The loss of working farms can mean higher costs for those farm operators remaining in the area. Farmers who had previously been able to purchase needed agricultural commodities from their neighbors may now have to source from further distances and at higher costs, due to the increased scarcity of these commodities. Similarly, the loss of farmland also dries up markets for the sale of commodities to other farmers. For example, fewer neighboring farmers means that any remaining livestock farmers in an area have fewer options for the sale of their excess manure, a valuable commodity that will be in less demand in a developed area. Farmers may now have to transport it further (cutting into profits) to find acreage in need of fertility or find alternative uses for it. The loss of farmland also creates higher costs for farmers looking to acquire additional land to expand/diversify their operations, as they are competing with development. The higher costs for remaining farmers demonstrates the need to preserve contiguous stretches of farmland prevents farms from becoming isolated geographically and economically.

Availability of Labor

Farming is a labor-intensive occupation, with a lack of available laborers, especially during the harvest. Attracting local workers familiar with, or willing to work in agricultural production has proven difficult for many farmers, leading to reliance on foreign labor and/or to an incredible workload for the farm operator.

H-2A Visa Program

The H-2A visa program is the federal program which farmers must currently use to access seasonal foreign labor. There are many generally burdensome requirements for usage. The extensive and often confusing application process for the program requires that farmers submit the initial required documentation to the U.S. Department of Labor up to 9 months prior to the start date of the job.

Farming operations are energy intensive and farmers can not always recoup their input costs through the sale of their products. At right, as development moves closer to working farms, conflicts may arise with new neighbors unaccustomed to the smells and noises. (Photo at right by Edwin Remsberg.)

Since 1900, the farmer's share of the retail food dollar has been steadily decreasing. Eggs today cost less than half of what they cost in 1970, in inflation-adjusted dollars.

Access to the program also requires an active recruitment effort to fill the positions locally, which includes advertising in newspapers and on radio, with farmers also having to demonstrate that the need for the workers is only temporary. These efforts rarely generate applicants. The farmer is then responsible for providing free housing and either 3 meals per day or access to a kitchen where laborers can cook their own food. The wage rate established for these workers in Maryland was roughly $10/hour (workers are often paid higher) as of 2010, with farmers also being responsible for the workers' travel and subsistence costs for the trip to and from the country of recruitment. This stands in sharp contrast to the wages paid to agricultural workers in Mexico and other countries competing with Maryland farmers, where wages are generally below $1/hour.

The requirements for the H-2A program can be expensive and confusing for farmers. For East Coast farmers in need of labor however, the program might be the only choice, as there is a much smaller pool of resident migrant labor readily available locally than exists in the Western United States.

For more information. . .

- U.S. Department of Labor: www.foreignlaborcert.doleta.gov/h-2a.cfm
- Agricultural Employers and Workers section at the Maryland Department of Labor Licensing and Regulation: www.dllr.md.gov/employment/agempworker.shtml. Or call: 301-393-8218

Workforce Housing

One difficulty with accommodating H-2A workers is with the regulatory requirements for the temporary housing. Certain requirements that were designed for year-round residential houses are also applied to the temporary quarters used for seasonal workers which can vary by type, and include trailers, bunk houses, farmhouses, and other structures.

Local regulations governing the number of unrelated persons that are allowed to live together also presents problems. Some local governments have requirements that no more than 6 or 8 unrelated people may live together in a building. While these regulations may have been designed to prevent the operation of boarding houses in residential neighborhoods, it can also affect a secluded farm bunkhouse that was built to accommodate 10 people.

Energy Costs

Maryland's agricultural producers are very concerned about rising energy costs. Farming operations are very energy intensive, due to the need for fuel and petroleum-based fertilizers and chemicals. With the volatility of energy prices, farmers cannot always recoup input costs through the sale of their products. Finding new ways to both cut back on and meet the energy demands of their farms is a continuing concern for farm operators.

Crop Damage & Environmental Degradation from Wildlife

As Maryland has become more developed over the past several decades, more areas have become off limits to hunting and in many ways have become havens for certain wildlife species whose populations have boomed. As a result, in Maryland, large numbers of animals such as deer and geese can wreak havoc on farmers' fields, feeding on nutrient-rich crops and transforming them into nutrient-laden feces. And unlike livestock that usually do not have direct access to waterways, wildlife often excrete this nutrient and bacteria-rich manure directly into or near tributaries leading to the Chesapeake Bay.

In 2009, wildlife related crop losses for farmers were estimated at $10 million statewide, mainly from deer who can greatly decrease crop yields for a variety of agricultural products. Some of the state's vineyards have reported losses of as much as 20 percent of their grapes during the growing season, with corn and soybeans being lost as well. Keeping wildlife out of fields and vineyards is next to impossible, or at least impractical, leaving population control as the best means to ensure both minimal crop damage as well as healthy herd/flock sizes. Additionally, fenced in "refuges" such as storm water retention ponds can result in wildlife denuding vegetation in sensitive areas.

At left, defoliation in Maryland from an unmanaged deer population. (Photo: DNR)
At right, denuded mudflats created by resident Canada Geese complicate a $6 million marshland restoration project in Washington, D.C. (Photo: Erica Goldman, Chesapeake Quarterly)

For more information

- Maryland Department of Natural Resources, Wildlife and Heritage Service: www.dnr.state.md.us/wildlife. Or call: 410-260-8540; Toll-free in Maryland: 1-877-620-8DNR, Ext. 8540
- USDA's Wildlife Services: www.aphis.usda.gov/wildlife_damage/index.shtml
- Wildlife Services' Hotline: 866-487-3297

Commodity Pricing

Unless they are marketing directly to customers, farmers have very little ability to influence the prices that they receive for their agricultural products. Since 1900, the farmer's share of the retail food dollar has been steadily decreasing, with farmers receiving only about $.20 out of each food dollar spent by consumers. This compares to $.41 in 1950, and $.31 as recently as 1980. Today, the remaining $.80 goes to processors, distributors, marketers, retailers, and other middlemen. In addition, the prices that American consumers are paying for a variety of agricultural products at the retail end has also decreased. What this has meant for farmers is that not only have food dollars spent per retail food item decreased, but farmers' share of that dollar has also decreased. In short, agricultural producers are "price takers" with little ability to influence their income, short of direct sales to consumers.

Agricultural futures markets drive much of the pricing for agricultural commodities, which for certain commodities also reflect a patchwork of public and private pricing programs and regulations that few understand and only some benefit from. Some economists lay part of the blame for pricing swings with speculators, whose trading in agricultural commodity futures can have a large impact on product pricing. Other causes can include weather or small changes in demand for the final retail products.

Regardless of the causes of commodity price swings, historically the solutions have been similar, coming in the form of federal fixes. The various farm programs in place currently were at one time responses to particular problems that arose under different circumstances than today, and in some cases, have been layered one on top of another. This has created a sometimes complex pricing system for certain commodities that today's farmers have difficulty forecasting.

Controlling Input Costs

The price swings that affect certain commodities not only affect how much farmers receive for their own products, but also how much they have to pay to purchase necessary inputs for production, such as fuel, fertilizer, or feed grains used in animal agriculture. The price of animal feed is in turn driven higher by the rising cost of energy needed to produce those grains. Grains such as corn also have competing uses such as biofuels and along with energy, are subject to increasing demand from developing economies (currently a big factor driving input prices higher). This means that any changes in the conditions of those competing markets (including any weather-related impacts on those crops worldwide) must also be taken into account, making input costs hard to predict. In order to survive such input price swings, agricultural producers often have to rely on credit in the course of production, which has become scarce for many farmers. Lending rates and access to credit is a continuing concern amongst agricultural producers, as production of their primary agricultural products is subject to unstable market and weather conditions, thereby creating an unstable revenue source for the service of debt.

Section 2.
Farmer Responses to Change

Maryland's farmers have had to adapt their operations, showing great resiliency. To remain competitive in a global marketplace, they have responded in a number of ways, such as through growing the scale and efficiency of their operations, by focusing on high value products, through diversification of products and activities, or by finding other revenue streams and new ways of operating their businesses. **Below is a discussion of how and why farmers have responded to changes, and what each entails.**

To hear stories from Maryland's farmers:
marylandsbest.net/farmers.php

Increased Efficiency

Despite the increased competition and other factors impacting farmers, the Maryland agricultural sector is still a strong global competitor thanks to the fertility provided by Maryland's natural characteristics, our close proximity to large numbers of consumers, and the creativity of Maryland farmers. Due to a smaller land base, Maryland's farmers have found a way to adapt by focusing on dollar value per acre. This has often meant specialization in producing high value products such as horticultural and specialty crops, fruits and vegetables, or grains made valuable for their use by the poultry industry, as biofuels, and as subsidized commodity crops. Similarly, Maryland's poultry, livestock and dairy farmers have specialized by focusing on creating a high value per acre through animal agriculture. By taking relatively cheap primary inputs in the form of feed grains and/or pasture grasses and turning them into animal protein in the form of chicken, beef, or milk, our animal agriculture producers are able to achieve a level of efficiency per acre that allows them to remain competitive, with Maryland being the 7th largest producer of chickens used for meat in the country.

Remaining competitive in animal agriculture has generally required the concentration of animals (especially poultry in Maryland), and often takes the form of contract farming. For most of Maryland's poultry growers, contract growing means that all inputs, including the birds themselves, are provided by processors who pay the farmer to raise the animals under a contract. The concentrated feeding of animals may lead to unpleasant smells, dust, or other byproducts that neighbors might not readily appreciate. However, this industry is essential to our rural economy.

As for Maryland crop growers, they have benefitted from nearby demand for their products, from a hospitable climate, by finding ways to increase yields, and by renewing the natural fertility of Maryland's rich soils. The state's fruit and vegetable growers have a long history in the region, growing high value products that don't need an expansive land base. Grain growers however, in order to achieve efficiency, need access to large tracts of land which are increasingly expensive. As a result, many grain producers end up renting a large amount of the land that they farm, with the ideal situation being that the lands being farmed lie contiguous to each other. In piecing together parcels of land, grain farmers are able to achieve the economies of scale necessary for profitable production and provide a product that is essential to the state's poultry and animal agriculture industry, and thus to Maryland's rural economies.

For more information about:

- Poultry production, see Delmarva Poultry Industry, Inc.: www.dpichicken.org
- Horticulture, see Maryland Nursery and Landscape Association: www.mnlaonline.org
- Dairy industry, see: the Mid-Atlantic Dairy Association: dairyspot.com
- Grain production, see: the Maryland Grain Producers: www.marylandgrain.com

Diversification

Farmers have also adapted to changes through diversification of products and activities. Farm operators that might have traditionally farmed one primary agricultural product are looking to diversify their farm production, in an attempt to hedge against the fluctuating prices that they receive for their primary products. For others, a wholesale switch to new, potentially more lucrative ventures such as wine-making is seen as an opportunity to keep land in production, with a growing number of wineries having appeared across the state in recent years. For some communities though, there are questions as to at what point certain activities should no longer be considered agriculture. As these situations continue to be worked through, questions involving zoning and private property rights will need to be addressed. It should be noted that these activities may be keeping farms in business that might otherwise be sold for development.

Niche Production

Farmers are attempting to create more value through their farms with the production of higher value niche foods or crafts. The small-scale production of these items can be a key alternate source of revenue. Niche products currently produced by Maryland farmers include jams and jellies, maple syrup, honey, greenhouse and nursery products, craft products, flowers, and retail meats.

Agritourism

Farmers have turned to agritourism, and/or event hosting as a means of diversification. Farmers with available land may look to grow corn mazes, host farm animal petting zoos, offer hay rides and cider tasting, or any number of other activities designed to attract visitors to the farm. These events can bring large numbers of people and some additional traffic to areas that may have previously had little of either. While agritourism may incorporate new and different uses for agricultural land, it also ensures that the land stays in agriculture, as people are coming to visit working farms.

Winemaking

Over the past several decades winemaking has become a growing part of Maryland agriculture, with vineyards and their wineries serving as either self-sustaining operations or as a supplement to the primary farm operations. The soil, climate conditions, and terrain in much of Maryland allow for the production of good wines, something known since the country's early days. Thomas Jefferson enjoyed Maryland wine so much that he brought some vines from the estate of a Maryland friend to grow at his own estate in Monticello, VA. In 2010, there were 42 wineries in 15 Maryland counties, representing a $90 million economic impact, with more wineries under development.

As winemaking is a new enterprise in some counties, there is a learning curve for local governments and winemakers alike as they navigate certain issues for the first time. Concerns include how to define and zone vineyards and their wineries as agriculture, how local health departments should regulate foods served in tasting rooms, if/how byproducts from winemaking such as grape skins and processing water can be used (as compost, fertilizer, etc.), how events such as wine tastings ought to be permitted, and if wineries may source grapes from vineyards other than their own. That last concern is especially significant to new wineries, as it takes a number of years for vines to be able to produce grapes for wine, meaning wineries need grapes from elsewhere to make a profit until their own are ready for winemaking.

For more information . . .

- Maryland Wineries Association: www.marylandwine.com. Or call: 410-252-WINE or toll-free: 800-237-WINE
- Maryland Grape Growers Association: www.marylandgrapes.org

Organic Production

Another change from typical production agriculture is the growing and raising of organic foods. Farmers who are willing and have the land, labor, and resources to produce organic products are often able to achieve a premium for their products, due to growing consumer demand for organic foods. Producers of

Cygnus barrels and other wine making materials. (Photos: Edwin Remsberg.)

organic products however, can be very different from conventional farming and can require a retooling of farm operations, equipment, and land usage. The investment is necessary, however. Organic certification is a rigorous process that takes into account the factors of production, and is only given after a three year "transition period". Inspections and extensive documentation are also required for certification.

The federally accredited Maryland Organic Certification Program, run by the Maryland Department of Agriculture, ensures that standards are being met for both producers and handlers of organically-raised foods. Organic certification assures the consumer that the product was grown using organic methods and that no synthetic pesticides, fertilizers, and genetically engineered organisms were used in production.

For more information about. . .

- Organic agriculture: www.marylandorganic.org/
- MDA's Organic Certification Program: www.mda.state.md.us/md_products/certified_md_organic_farms/index.php

On-Farm Processing

Some entrepreneurial agricultural producers are looking to "value-added operations" as a way to gain more control over their products' pricing and to capture a larger share of the retail price. One form of value-added agriculture involves the on-farm processing of raw agricultural products into higher value consumer-ready food and fiber products, thereby eliminating one of the middlemen involved prior to retail. On-farm processing can include butchering, cooking, packaging, grinding, weaving, smoking, canning, preserving, spinning, etc.

Direct Marketing

Closely related to on-farm processing is direct marketing, whereby farmers take the products that they have grown and processed on their farms directly to consumers. This may involve selling products at farmers' markets or in on-farm stores, selling to local restaurants or institutions such as schools, or through Community Supported Agriculture (CSA), where community residents purchase shares of the farm's products.

Direct marketing is an attempt to gain more control over product pricing. It is a response to the problem of market access and to the sometimes wild price fluctuations that can plague conventional markets for agricultural products. From the farmer's perspective, it is also one bright side to the fact that development has brought consumers into closer contact with farmers. Farmers engaged in direct marketing are trying to open new markets for their products, and may attempt to brand their products by creating a close relationship with their consumers. This strategy has been successful in recent years as seen in the example of the tremendous growth in the number of farmers' markets.

Sale of Land

For those farmers who no longer see their farms as viable business options, or who have high debt burdens, the lure of selling all or some of their land to developers has resulted in the loss of large tracts of Maryland's farmland for development. In the past 40 years, nearly half of the state's farmland has been taken out of production or otherwise developed. For farmers who are struggling to make ends meet, and for those who have no family members interested in taking over farming operations, the incentive to sell can be great.

Maryland farmers are also largely an aging population, meaning that even economically viable farms might be sold to fund a retirement or to settle estate taxes upon a farmer's death. With a decreasing agricultural land base whose usage is in competition with higher value land uses such as development, farmland has become more expensive for those younger farmers wishing to get into agriculture or expand their operations. As a result, even if a farmer wishes to sell his land to another farmer or into a preservation program, this might not be economically prudent and the land may end up being sold for development purposes.

(Photo by Edwin Remsberg.)

Energy Production

Due to the increases in, and volatility of energy costs, farmers are looking for new ways to control these costs and/or obtain energy. One such method that is gaining traction amongst farmers, and for which federal funding is available, is the pursuit of renewable energies produced on the farm. Technologies such as wind energy and energy from manure are being investigated as possibilities for energy production, as both can draw from readily available resources. The building of the necessary infrastructure (such as wind mills) however, may become a contentious issue within communities, depending upon how these ideas are received by neighbors. Meanwhile, it still remains to be seen if energy from manure can actually become an efficient, viable energy alternative. If successful, this could produce a market for excess manure, although it is unclear how the logistics might play out with regards to the storage and movement of manure used to produce energy. Of note, this type of energy generation technology may also address some nuisance issues, as in the case of cow manure, as the digestion process produces fertilizer with a greatly reduced odor, which farmers can then spread on their fields.

For more information about farm energy alternatives: www.attra.org/attra-pub/farm_energy

Changes to Infrastructure

Many of the ways that farmers have found to remain in business may require changes to the farm's infrastructure. New equipment and buildings to house that equipment might be necessary, as well as storage facilities for any new agricultural products produced. Wineries may include tasting rooms, and on-farm processors will need facilities. As with any changes, this may take some getting used to. For example, new smells may accompany the production of new products and new vehicle traffic may appear in the form of customers or commodity deliveries and pickups, all of which neighbors may be unaccustomed to. Farms are businesses first however, and any new logistical considerations, while perhaps not anticipated by neighbors, might be necessary for business survival. And as seen throughout Maryland, the alternative to profitable farming operations might very well be sale for development. It is also important to note that in the vast majority of cases, changes to farm operations that may at first have been viewed uneasily by neighbors, have often been eventually embraced as bringing vibrancy and economic benefits to communities.

Lost and Endangered Agricultural Sectors

Maryland farmers have done remarkably well in adapting to the rapidly changing economic realities of farming over the past 50 years. However, some changes have proved to be too much for certain sectors of Maryland agriculture, with producers of a number of products having responded by either stopping production of those products, or by leaving the state. Although perhaps most prominently seen in the case of the decline of the large-scale vegetable and fruit production and processing industry that existed through the first half of the 20th century, there are a number of other agricultural sectors that have also largely left the state. These include tobacco and swine. Currently endanged sectors include the horse and dairy industries.

For more information:

- www.marylandhorseindustry.org
- www.mda.state.md.us/publications/special_reports.php

Section 3.
Tools for Problem Solving in Local Communities

Agriculture in Maryland is a vibrant industry, but it is also rapidly changing, which can be difficult for communities. Developing solutions that address living and working in a changing agricultural landscape will involve a learning curve, and the solutions will not look the same in each location. However, there are tools that communities can use to help facilitate the process. **Below are some such tools, but the immediate need is for better communication and understanding within communities to help support the development of informed solutions.**

Recognizing the Importance of Maryland Agriculture

It is essential that Marylanders understand the importance of what is at stake when discussing agriculture in the region. Although dollar per dollar, agriculture is not the largest industry in Maryland, it is certainly one of the most important. Whether employing large numbers of people, feeding our communities, or preserving our natural and environmental heritage, Maryland agriculture is essential for a strong and healthy state and region. Communities should seek to understand Maryland agriculture and support farmers coping with rapid changes.

Economic Importance

Agriculture is the largest commercial industry for employment, and is essential to the local economies of the rural parts of the state. If properly supported, Maryland's farmers can compete with farmers worldwide, due to the region's many natural advantages and ready access to 75 million consumers (25 percent of the U.S. population) within an 8-hour drive. The state's farmers have continually adapted to the rapid industry-wide changes and have been successful in creating the 7th highest dollar value/agricultural acre ratio in the nation. Countless jobs depend upon farming and as it changes more jobs are being added to what has become a dynamic industry that produces a wide variety of products, while supporting an even wider variety of related industries. If Maryland's economy is to remain strong and diverse, community support for a profitable agricultural sector is essential.

Consumer Demand for Locally Grown Foods

The demand for locally grown agricultural products has grown in recent years, with tremendous growth of new farmers' markets, Community Supported Agriculture, on-farm retail stores, and other direct to consumer sales in the past 10-20 years. Meeting this demand is also accomplished in other ways, as in the case of Maryland's Farm to School program, which matches local farmers with local schools, allowing for healthier, fresher produce to be served for school meals. Similarly, many local restaurants and retailers are also serving local products when in season. As part of becoming an informed consumer, Maryland shoppers should seek to understand which products are available locally and at what time of year. There is also growing interest in preserving our harvest through home canning and freezing of locally grown products.

Much of this demand comes about as consumers are becoming increasingly aware of the long distances that their foods travel (often several thousand miles), with concerns about freshness, safety, quality, and the environment driving consumer decisions to seek out local products. Local foods address these concerns and also make for tastier foods, as the minimal amounts of processing, preservation, and transportation required prior to retail allow them more time to ripen and sweeten before being picked. Communities should encourage venues for local agricultural prod-

ucts as this will increase the economic viability of not only local producers, but of communities as well.

To see when particular foods are in season:
marylandsbest.net/in_season.php

To hear stories from Maryland's farmers:
www.marylandsbest.net/farmers.php

To find your local farmers' market, see Maryland's Best at: www.marylandsbest.net
Or email: marylandsbest@mda.state.md.us
Or call: 410-841-5770

For information on Southern Maryland agricultural products: www.somarylandsogood.com/

Addressing Food Security: Encouraging a Regional Food System

There are a number of factors (many engineered) which may not be sustainable that allow cheap foods produced thousands of miles away to reach East Coast consumers. In contrast, Maryland has a number of natural advantages including rich soils that our farmers are working hard to conserve, regular rainfall, hospitable terrain and climate conditions, and a diverse agricultural sector that produces a wide variety of products. As energy and resource constraints make our current import-dependent food system more expensive, it will be critical that we support a strong agricultural sector in the region. Currently however, many of our farmers, especially growers of vegetables and fruits, have difficulty accessing the food distribution system which is geared for the large-scale, long-distance shipping model that has been the norm for the past 50 years.

There are a number of ways that Marylanders can help encourage a strong regional food supply system. Communities should seek out ways of supporting a regional processing and distribution system. For example, local governments might look at how they can attract (and retain) companies involved in food processing. The diversity of crops that can be grown and the overnight trucking access to one-third of the U.S. population makes food processing in the region a natural fit.

Local economic development agencies and chambers of commerce might look to encourage co-ops of local producers (or brokers). On a limited scale, local foods are already addressing food security issues in the state in a very real way, as they are finding their way into inner city neighborhoods that might have limited access to grocery stores, and are being marketed to recipients of the Women, Infants, and Children and Senior Nutrition programs. There is a push by a number of community organizations to allow fresh Maryland products to reach these so-called "food deserts", and there are a number of organizations nationwide working to build local and regional food systems that could also be valuable resources. Although establishing regional distribution capacity will take time and involve establishing new logistical arrangements, it is a key step in both addressing food security and supporting local agriculture.

Successful Models

One model elsewhere that counties might look at for ideas about encouraging a regional food system exists in the case of the Vernon County (Wisconsin) Economic Development Association (VEDA). VEDA was recently awarded a $2 million grant from the U.S. Economic Development Administration to turn an empty manufacturing plant into a food processing and distribution center that will provide "the aggregation, processing and distribution infrastructure to help small producers increase their market opportunities and business

(Photo by Edwin Remsberg.)

capacity" (www.veda-wi.org/News.html#eda). Even prior to receiving the award, two produce distributors had already decided to locate in the building. A Maryland success story exists in the case of the return of the potato processing industry to the state, with a facility opening in Dorchester County in 2008. This has benefitted the local economy by creating demand for a locally grown agricultural product and providing employment.

Working at the county level, VEDA has also been successful in encouraging other means of building local food distribution capacity, such as in the establishment of a cooperative of local food producers and institutional food buyers that will act to broker the needs of both groups (www.veda-wi.org/News.html#coop). The Maryland dairy industry might provide another model of successful cooperatives, as the vast majority of dairy producers are co-op members and the industry is one of the few remaining agricultural sectors still heavily involved with local and regional food processing and distribution.

Another organization, the Leopold Center for Sustainable Agriculture, located at Iowa State University, is also making great strides in helping to encourage regional food systems nationwide. Amongst other initiatives, they, along with Iowa State's Institute for Transportation, have developed a web-based Fruit and Vegetable Market Planner that shows rates of demand for 80 different crops in Iowa, according to a variety of different criteria. This can help Iowa farmers look at their marketing territory to see where the greatest opportunities exist.

According to the Center, "we think the Iowa Fruit and Vegetable Market Planner will be used by local food groups and county and city governments as they develop planning strategies to increase local food commerce" (www.leopold.iastate.edu/news/newsreleases/2010/092710_planner.html). Intended to be a national model, the Center is working on a technical guide that explains how to set up a similar application for other states and regions, to be available later this year.

For more information about . . .

Leopold Center:
www.leopold.iastate.edu

Leopold Center's Market Planner:
www.intrans.iastate.edu/marketplanner

Vernon County (Wisconsin) Economic Development Association (VEDA):
www.veda-wi.org

Economist Ken Meter of the Crossroads Resource Center has done research on the potential for regional food systems nationwide:
www.crcworks.org

National Sustainable Agriculture Information Service has resources on regional food systems:
www.attra.org/attra-pub/local_food

Oklahoma Food Cooperative, operated by both producers and consumers, runs a statewide distribution network that brings local products to market: www.oklahomafood.coop

The La Montanita (New Mexico) Cooperative's distribution center provides pick-up, supply and refrigerated storage services for producers, and distributes regional products to retail outlets. It also provides financing for new foods businesses: www.lamontanita.coop

Future Harvest - Chesapeake Alliance for Sustainable Agriculture (CASA) promotes a regional food system: www.futureharvestcasa.org/

Harry Hughes Center for Agro-Ecology:
agroecol.umd.edu/

Rural Maryland Council provides a venue for addressing economic development concerns:
www.rural.state.md.us

For a listing of local marketing resources, see the Maryland Rural Enterprise Development Center's Resource Map:
mredc.umd.edu/MarylandMap.html

University of Maryland Cooperative Extension Agmarketing site: agmarketing.umd.edu

Maryland Food Center Authority, created by legislation, plans and developes regional food industry facilities: mfca.info

Conserving Natural Resources

One of the main problems confronting the state and its food and fiber sector is our dwindling natural resources and undeveloped areas. However, there are a number of things that local communities can do to help conserve natural resources and support Maryland's farmers. First, Marylanders should seek to understanding the environmental context not just of the Maryland agricultural sector, but:

1. The state, pace, and type of development occurring statewide;
2. The factors involved in smart and sustainable management of undeveloped land; and
3. How the state's various environmental and land use decisions interact with each other and with those in other states.

Staying Informed

The agricultural sector has in fact been making tremendous strides over the past several years in limiting nutrient contributions to the Chesapeake Bay at the same time that the urban and suburban sectors have been expanding their nutrient contributions. This is mainly due to development, particularly development that occurs in areas without access to waste water and storm water treatment facilities. Yet, it is often stated that targeting the agricultural sector is the most cost-effective way to limit nutrient loads to the Bay, as agricultural Best Management Practices do not involve expensive retrofits such as waste water treatment plant and urban storm water upgrades. However, years worth of progress on the installation and implementation of BMPs on the state's farms has created a situation where the easiest and most cost-effective solutions are largely already being done. This means that each additional dollar invested may not go to the cheapest activities, resulting in diminishing returns on investment.

The easiest way to gain an understanding of the capacity and state of Maryland's agricultural conservation efforts is to call your local Soil Conservation District, tour a farm, and talk to those who are involved in farmland conservation efforts. Open dialogue can help in the recognition of problems and the development of new ideas and solutions.

For more information about. . .

- Agriculture and conservation and how communities can help facilitate the process with local Soil Conservation District: www.mda.state.md.us/resource_conservation/technical_assistance/index.php, or at www.mascd.net. Or call: 410-956-5771
- Soil Conservation Districts: www.mda.state.md.us/pdf/Sunflwr_Bro_reprint-pr2.pdf
- MDA's Office of Resource Conservation: www.mda.state.md.us/resource_conservation/index.php

Funding Opportunities and Technical Assistance

VEDA's $2 million grant came through the U.S. Economic Development Administration: www.eda.gov

USDA Rural Development provides financing and technical assistance for projects that help farmers access markets: www.rurdev.usda.gov

USDA Rural Development's Business and Cooperative Programs promotes agricultural economies by financing competitive businesses, including sustainable cooperatives: www.rurdev.usda.gov/rbs/oa/oadir.htm

Mid-Atlantic Farm Credit provides many financing options for agribusiness: www.mafc.com

Maryland Agricultural & Resource-Based Industry Development Corporation (MARBIDCO) has financing available for agribusiness: www.marbidco.org

Northeast Sustainable Agriculture Research and Education (SARE) offers competitive grants for new ideas in farming that improve profits, stewardship, and the vibrancy of farm communities: nesare.org/

University of Maryland's Cooperative Extension has offices in each county and has the development of local food and agricultural systems as one of its main focus areas: extension.umd.edu/

University of Maryland's College of Agriculture and Natural Resources: agnr.umd.edu/

Smarter Planning

One of the surest ways to ensure that we are conserving our natural resources is to look beyond the agriculture versus wastewater treatment plant upgrade cost analysis to other median-cost solutions for limiting nutrients. Lying somewhere in the middle of this rural/urban focus are the large areas of the state where development has occurred in unregulated areas that have no access to wastewater or storm water treatment facilities. Nutrient loads from residential septic systems are in fact far higher than residential loads from housing that is located in areas with access to sewage treatment facilities, meaning that smarter planning and less septic sprawl can be another cost effective way to conserve our natural resources.

Another benefit of smarter planning is that it can help ensure that the most productive agricultural lands are left in production, by promoting development in areas that have both access to infrastructure, and that may be of marginal use for agriculture. This can also help ensure that agricultural land is not fragmented during the course of development, as agricultural corridors where farms can work together is essential to achieving the economies of scale needed for efficient food production, processing, and distribution. Farms that become isolated geographically from other farms of the same type can also easily become economically isolated. For example, it might not be economical for milk haulers to continue picking up milk from a dairy farm that is isolated from other dairy farms on his or her route.

Planning development around existing infrastructure is a smart way to conserve natural resources and can be accomplished in a number of ways, including through comprehensive planning and supportive zoning arrangements, the transfer of development rights, directed development (including the encouragement of infill development), and land preservation. Kent County for example, has built agricultural land preservation into its planning mandate and zoning policies.

Planning for smart growth can require an investment however, as it often relies on modeling, using tools such as Landscape Utility Models. These models help planners evaluate natural resource data (soils, sensitive resource areas, water resources, etc.) and infrastructure data (sewers, roads, utilities, etc.) to plan development that relies on existing infrastructure and avoids building in those areas with natural land characteristics that are most valuable to agriculture. These investments can pay off, especially in light of rising transportation and energy costs. This is because smart growth can limit the need for additional investments in infrastructure, and can make a county's housing stock more marketable if it is built close to public transportation and amenities. Planning for smart growth will also help the state and its local governments meet any federal environmental requirements that may arise in relation to Bay cleanup efforts.

For more information on Smart Growth . . .

- Maryland Department of Planning: www.mdp.state.md.us/OurWork/smartGrowth.shtml. Or call: 410-767-4562
- Local Planning Departments: www.mdp.state.md.us/OurWork/Counties/LocalPlanningByCounty.shtml

Preserving Farmland

A number of organizations work to preserve farmland and natural resources statewide, including the Maryland Agricultural Land Preservation Foundation (MALPF), Program Open Space, the Rural Legacy Program, the Maryland Environmental Trust, the USDA's Conservation Reserve Enhancement Program's (CREP) Easement Program, and the USDA's Farm and Ranch Land Protection Program (FRPP). MALPF in particular focuses strictly on agriculture and has been very successful in preserving large amounts of farmland statewide. MALPF works at the local level to purchase development rights of valuable farmland in order to permanently keep it in agricultural production. The program consists of two basic steps: the establishment of agricultural preservation districts, and the purchase of perpetual agricultural conservation easements. Administered at the county level by an Agricultural Preservation Board, the program has resources available to help farmers that may be thinking of selling their land, to instead keep it in agriculture.

With a variety of programs and resources available, local governments can work to preserve farmland by developing strategies that can leverage a number of these resources together. One strategy might be for counties to look at ways of preserving those properties

that are most at risk of being sold for development, and that may have short time horizons. Identifying those properties and seeking out creative public-private partnerships (involving each level of government) to provide gap financing for the expedient purchase of at-risk properties is one way that counties can ensure that agricultural production remains viable locally.

As part of their preservation efforts, local governments should seek out the various organizations involved with preservation to see how they might partner in the process, and to garner a variety of input when putting together an overall preservation strategy. Engaging such organizations can be a good way to build the momentum necessary for success. As part of any comprehensive planning efforts, local governments should also look to work with the state and other counties as they evaluate the potential for statewide or cross-county collaboration on initiatives such as the transfer of development rights (see link below) and other land preservation tools. Local ordinances, including local MALPF ordinances, should also be re-evaluated to ensure county and state goals are being met.

For more Information about . . .

- Farmland preservation: www.farmlandinfo.org/documents/27761/fp_toolbox_02-2008.pdf. Or www.farmlandinfo.org
- Transfer of Development Rights: www.farmlandinfo.org/documents/37001/TDR_04-2008.pdf
- Maryland Agricultural Land Preservation Foundation: www.malpf.info. Or call: 410-841-5860
- Program Open Space: www.dnr.state.md.us/land/landconservation.asp
- Rural Legacy Program: www.dnr.state.md.us/land/rurallegacy/index.asp
- CREP Easement Program: www.dnr.state.md.us/wildlife/Habitat/milo.asp
- The Maryland Environmental Trust: www.dnr.state.md.us/met/index.asp
- USDA's Farm and Ranch Land Protection Program (FRPP): www.nrcs.usda.gov/programs/frpp
- 1,000 Friends of Maryland's Keep Farmers Farming initiative: friendsofmd.org/priority-issues/viable-working-lands

Managing Wildlife Populations

Unmanaged wildlife populations in and around many communities can present a problem both to agricultural producers and the natural environment. Communities should look at any publicly owned lands or other properties that serve as refuges and develop a county-level plan to manage the resident wildlife. The Maryland Department of Natural Resources (DNR) can provide management options to counties and the public.

Management plans can include egg addling, limiting waterfowl access to ponds, avoiding large expanses of mowed grass, controlled hunts in residential areas, encouraging the taking of female or antlerless deer, and encouraging the use of deer and goose management permits. Deer management permits are issued by DNR, and allow landowners with damage to commercial crops to shoot deer year round at no cost to the landowner. Similarly, there are two goose management permits that are easily available through the U.S. Department of Agriculture's Wildlife Services Office that allow property owners to destroy eggs and nests or hunt geese depredating on crops.

There are some good examples of local governments and organizations that have developed successful wildlife management plans. Montgomery and Howard counties have both implemented good county-wide deer management plans, with the help of DNR. Several private landowner organizations have also been successful in managing their deer populations in

cooperation with the Quality Deer Management Association, which uses science-based management techniques to ensure a healthy deer population.

For more information about. . .

- Maryland Department of Natural Resources, Wildlife and Heritage Service: www.dnr.state.md.us/wildlife. Or call: 410-260-8540; Toll-free in Maryland: 1-877-620-8DNR, Ext. 8540
- USDA's Wildlife Services in the Animal and Plant Health Inspection Service: www.aphis.usda.gov/wildlife_damage/index.shtml. Or call the Wildlife Services' Hotline at: 866-487-3297
- Quality Deer Management Association: www.marylandqdma.com

Ensuring a Level Playing Field

Maryland's farmers have a number of natural advantages that allow for a strong agricultural industry in the state. Given a level playing field, our farmers can compete with producers anywhere in the world. However, in order for Maryland's agricultural sector to remain the economic engine that it is, we need to ensure that our farmers are, to the extent possible, facing similar production considerations as farmers elsewhere.

Environmental Regulations

Particularly in the case of the environment, farmers understand the need to protect our natural resources and have been leading the state's efforts in soil and nutrient conservation, being dependent upon those soils for their livelihoods. There has been tremendous success in the farming community over the past several decades in implementing Best Management Practices (BMPs) and limiting nutrient loads, and this progress should not be overlooked. Farmers realize the importance of voluntary conservation practices and want to see tangible improvements to the Bay perhaps more than any other group. They are well aware that without progress, there will be a push for potentially cumbersome regulatory requirements for agriculture that could push up their costs of production. This is particularly concerning when taking into account the nature of the global marketplace for agricultural products, where Maryland farmers have to compete with farmers elsewhere who don't face the same production considerations. Therefore it is necessary to ensure that environmental efforts aim for equity in competition.

It is also essential that there is sufficient support for farmers as they continue to engage in efforts to clean up the Chesapeake Bay. Rapidly incorporating new technologies and adapting on-farm operations for an entire industry takes financial and technical resources and will require a public-private partnership at every level of government. Without support, farmers will find it difficult to implement the additional conservation practices needed to meet the accelerated goals of the coming TMDL process. One reason for the loss of the state's once-thriving food processing industry is that new environmental requirements mandated during the 1960's were prohibitively expensive for aging processing facilities to meet. Without financial support, processors could not afford to upgrade their facilities and shut their doors, and impacting farmers' abilities to access markets. This example demonstrates the need for cost-sharing if our farmers are to remain completive. Farmers have shown their willingness to do their part, and these efforts should not be overlooked.

Local Regulations

It is critical that local officials understand how any local ordinances impact agriculture. Decision-makers should engage farmers to help develop solutions together. While many communities in the state offer tax breaks and other incentives for businesses to relocate to the area, with agricultural businesses it has unfortunately sometimes been the opposite. Burdensome rules adopted without full understanding of the implications can hurt farmers' ability to compete, sometimes leaving these businesses no choice but to stop production, resulting in more farmland available for development and a smaller tax base. Communities therefore should seek to understand the rapidly changing regulatory and fiscal context in which their farmers operate, in order to better support and understand the business needs of their farmers.

Supporting Value-Added Operations: Understanding the Benefits

There is real benefit for all sides in supporting and facilitating those value-added operations that fit with the social and cultural context of an area.

An Economic Opportunity

Value-added operations are so-named because they create real value not just for farmers, but for their local communities. Instead of value being created by processors, marketing firms, and other middle men, the additional value created remains with local farmers, who often support other small business owners in the area. Value-added operations such as on-farm processing should be seen for what they are – grass

roots small business opportunities. As such, local governments should attempt to provide support for them as they would for any other entrepreneurs. Farmers who are able to process products on their farms are able to garner a larger share of the retail dollar, creating additional value that can lead to job and income growth for those farms and any related industries. For cash-strapped local governments, the associated potential increase in the county tax base should also not be overlooked.

Potential For Growth

Today, there is increasing demand for locally processed products, and farmers are responding in a number of production sectors, including dairy, poultry, wines, and other higher value products. However, successful on-farm processors may well develop the capacity to process more agricultural products than they themselves can produce. With 75 million consumers within an 8-hour drive, there is no question that market demand exists for local products; what is missing is small to mid-scale regional processing and distribution capacity. This potential for growth should be seen for what it is – small business development that supports and provides markets for other farmers and jobs for processors. As such, developing local processing capacity is an integral step in establishing a regional food system.

A Community Decision

The potential for growth may raise some concerns among planning and zoning officials, as well as community members as a whole. If an on-farm processor does develop the capacity to process more products than his/her own farm can produce, then the decision to allow expansion of processing is rightfully a community one. All relevant stakeholders should be given a hearing to voice their concerns and decide how far business expansion ought to be allowed to develop. However, all citizens should be presented with an accurate picture of what each particular proposal entails. For most farmers, they are simply looking for ways to add value to their own products, marketing them locally on a very small scale while continuing to farm.

Facilitating Value-Added Operations

As value-added operations are new to many people, farmers and otherwise, it is inevitable that facilitating such operations will be a learning experience for all involved. Many farmers that are interested in on-farm processing may have little experience navigating the applicable federal, state, and local permitting and licensing requirements. Similarly, local officials may be unfamiliar with what is required of them through regulations and/or how to interpret those regulations, or what activities and responsibilities are being carried out by other agencies and/or at other levels of government. Communication and coordination will be essential to facilitating the changes that are necessary to keep Maryland farmers in business.

Roles, Processes, Timelines

As farmers navigate the various permitting requirements for value-added operations, counties can help by establishing clarity regarding requirements, processes, roles, and permissible activities, with clear reasons as to why or why not. Mutual understanding of the issues and clear communication of what is expected are crucial to avoiding confusion and frustration on all sides. One way to work through issues and establish clarity is by working closely with those relevant state agencies and county officials who are already working with farmers. These individuals will be familiar with the issues facing agriculture, and their insight can help local officials to develop smart policies and procedures that anticipate the future issues that might arise as agriculture continues to change. With their help, establishing clear processes, timelines, and roles at the local level can help prevent headaches and will communicate the necessary steps that entrepreneurial farmers should undertake early on. This can help ensure that farmers have all the necessary materials on hand to complete an application package when applying for permits or working with regulatory entities.

State Agency Ombudsmen

The Maryland Department of Agriculture (MDA) Marketing Office can provide valuable information, as they regularly work with local farmers and communities, and have experience with the pertinent issues, rules, and regulations that are coming into play with the changes in agriculture. In addition to MDA, most state agencies are involved with agricultural issues in some form has assigned an Agriculture Ombudsman to work with farmers and communities in resolving issues and providing guidance on the relevant state regulations. These individuals will have some familiarity with statewide agricultural issues, but may be unfamiliar with issues that arise locally. Therefore, it is essential that communication is established and that Ombudsmen are brought into discussions early on. They can help clear up any confusion as to which state regulations may apply to particular situations and how to interpret them, and may have already encountered similar situations elsewhere in the state.

- For information about MDA's Marketing Office: www.marylandsbest.net. Or email: marylandsbest@mda.state.md.us. Or call: 410-841-5770.
- See the Appendix of this Report for the contact information for each State Agency Ombudsman.

Agricultural Marketing Professionals

Many counties have an Agricultural Marketing Professional (AMP), usually located within the County Economic Development Department, whose job it is to be the liaison between farmers and officials. A county's AMP will help farmers navigate the various requirements for value-added operations at each level of government. As part of this process, it is essential that AMPs become familiar not only with officials and processes at the local level, but with the Agricultural Ombudsmen at the relevant state agencies, as well as any federal agency involvement. Establishing lines of communication will help keep everyone informed and aware, and should help facilitate well-thought out decisions and processes. AMPs are valuable resources, as they understand the issues that are facing both farmers and communities.

For contact information for each county's AMP, see the University of Maryland's Rural Enterprise Development Center's Resource Map: mredc.umd.edu/MarylandMap.html

Facilities and Logistical Considerations for Value-Added Operations

Any farmer interested in value-added agriculture, including on-farm processing, has to meet a number of state and local requirements that take into account the impact of the operations in the community, the logistics involved, the facilities being used, and the environmental health of the area.

Zoning and Local Law

For value-added operations to be successful, community support and understanding of the particular activity being proposed is essential, and in most cases, support for these activities has been widespread. However, there have been instances where certain community members or neighbors, for one reason or another, have challenged on-farm processing as a non-agricultural activity taking place on a site zoned for agriculture. Neighbors opposed to on-farm processing or another value-added activity may seek to prevent its approval through the local government or to prevent its implementation through the courts after local approval has been granted. In some cases this has occurred after a farmer has already made a capital investment. One widely known case in Maryland has involved a dairy farmer that had been granted local approval to process dairy products on-farm who then was sued for allegedly engaging in a non-agricultural activity, after already having built a costly processing facility, which had been approved by MALPF.

To avoid this type of situation, local governments should make a point of defining value-added operations, including on-farm processing, as agricultural activities in the local zoning and agriculture codes, as well as anywhere else in the code where it might be appropriate. Similarly, local approvals of value-added agriculture should make clear that the approved activity, within whatever limits the local government establishes, is in fact agriculture. As the site of any value-added activities will likely be zoned for agriculture; clarity and legal consistency on this point can help prevent any situations that might result in costly legal challenges. If counties do decide to look at updating their county codes, MDA can provide guidance/comments as to the types of activities that counties might want to include as agriculture in any updated definitions of agriculture.

For more information, contact MDA's Director of Intergovernmental Relations at: www.mda.state.md.us/about_mda/staff_dir/index.php#secretary. Or call: 410-841-5880.

Facilities

Local building, planning, and other applicable regulations apply with regards to wine tasting rooms, agritourism facilities, parking lots, and the like, but in the case of on-farm food and dairy processing facilities, farmers must also pass muster with the Maryland Department of Health and Mental Hygiene (DHMH), MDA, or the USDA's Food Safety Inspection Service (FSIS). Along with MDA, DHMH's Center for Retail Food, Plan, and Process Reviews evaluates plans for on-farm food processing operations for farmers wishing to process limited quantities of certain foods, while DHMH's Center for Milk Control reviews plans for on-farm dairy processing. DHMH and MDA, during their review process, work to ensure that the facilities have the capacity for the safe and sanitary processing of food products, including the pasteurization and processing of any dairy products. In some cases, particularly in the case of processing limited numbers of rabbits and poultry, indoor facilities may not be needed, and processing can take place in a designated or mobile outdoor slaughtering and processing area.

For more information about. . .

- DHMH's Center for Retail Food, Plan, and Process Reviews: ideha.dhmh.maryland.gov/OFPCHS/plan-review.aspx. Or call: 410-767-8400
- DHMH's Center for Milk Control: ideha.dhmh.maryland.gov/OFPCHS/milk.aspx Or call: 410-767-8429
- MDA's Food Quality Assurance Program: www.mda.state.md.us/feed-food_safety-grading/food_qual_assur/index.php. Or call: 410-841-5769

Wastewater Discharge

For those on-farm processors that may discharge wastewater or compost animal or plant byproducts, an Industrial Groundwater Discharge Permit may be required from the Maryland Department of the Environment (MDE). If the farm is compliant with a Nutrient Management Plan, and if food processing wastewater is registered with MDA's State Chemist's Office as a soil amendment that is safe for land application, then no Groundwater Discharge Permit is required, provided there is no resulting pollution.

To ensure that pollutants or excess nutrients are not being discharged, the State Chemist's Office tests water samples and may require additional information from the farmer. MDE also stipulates when and where land application of waste water may take place, and requires that records be kept of each land application. If land application is not an option, the farmer may send a written request to MDE for authorization to use a temporary holding tank to be disposed of through an approved wastewater hauler. For any other situations, the farmer should contact MDE's Wastewater Permits Program as well as their local environmental health department.

For more information about. . .

- MDE's Wastewater Permits Program: www.mde.state.md.us/programs/Permits/WaterManagementPermits/Pages/Permits/watermanagement-permits/index.aspx. Or call: 410-537-3559
- The Industrial Groundwater Discharge Permit: www.mde.state.md.us/assets/document/permit/2008PermitGuide/WMA/3.05.pdf
- MDA's State Chemist Section: www.mda.state.md.us/plants-pests/state_chemist/
- Local environmental health departments: www.dhmh.state.md.us/html/org-lhd.htm

Composting

If an on-farm food processor is composting their animal and plant processing byproducts and selling or bartering the composted product, then a National Pollutant Discharge Elimination System (NPDES) General Discharge Permit for Storm Water Associated with Industrial Activities (Storm Water Discharge Permit) is required from MDE. The permit requires that the farmer develop and implement a pollution prevention plan for any storm water runoff that may come in contact with composting materials. For farmers that are using their own compost on their own land, no permit will be required, provided no pollution results. MDE may also require a Storm Water Discharge permit in other scenarios, such as the composting of materials generated off-site.

Additionally, as in the case of waste water, an Industrial Groundwater Discharge Permit could be required for large "wind-row" composting operations or if any compost runoff is discharged by certain land application systems, such as spray. An Industrial Groundwater Discharge Permit may entail a number of other requirements as determined by MDE, but such requirements could be combined with the Storm Water Discharge requirements to avoid the need for separate permits.

For more information about. . .

- MDE's Wastewater Permits Program: www.mde.state.md.us/programs/Permits/WaterManagementPermits/Pages/Permits/watermanagementpermits/index.aspx. Or call: 410-537-3599
- Storm Water Discharge Permits: www.mde.state.md.us/assets/document/permit/2008PermitGuide/WMA/3.03.pdf
- Industrial Groundwater Discharge Permits: www.mde.state.md.us/assets/document/permit/2008PermitGuide/WMA/3.05.pdf
- Local environmental health departments: www.dhmh.state.md.us/html/org-lhd.htm

Additional Resources for Value-Added Operations

- University of Maryland's Rural Enterprise Development Center (MREDC): mredc.umd.edu
- For a compiled list of a variety of local agricultural business resources, see MREDC's Resource Map: mredc.umd.edu/MarylandMap.html
- University of Maryland Cooperative Extension provides information and training regarding value-added operation, and has offices in every county: extension.umd.edu
- The Maryland Agricultural and Resource-Based Industry Development Corporation (MARBIDCO) is a quasi-public economic development entity that can provide resources and financing for value-added operations: www.marbidco.org
- For a list of rural economic development offices: mredc.umd.edu/Documents/REDLists/Report-MarylandREDOffices.pdf
- MDA's Marketing Office: www.marylandsbest.net. Or call: 410-841-5770. Or email: marylandsbest@mda.state.md.us

Food Safety

Food safety is one immediate concern surrounding on-farm processing and direct-to-consumer sales. To ensure that foods processed on-farm are safe for consumers, a variety of governmental departments at the federal, state, and local levels have developed food safety programs and requirements. However, this has also made for a complicated regulatory environment for on-farm processors. As a result, farmers have voiced concerns that they have encountered duplicative or conflicting regulatory efforts from various levels of government that make becoming an on-farm processing entrepreneur difficult.

As on-farm processing activities are a new and growing part of local economies, it is helpful to understand the existing federal and state food safety requirements that any on-farm processing operations are already required to comply with, and to become familiar with the food processing operations themselves. Below is a description of the food safety regulatory structure for Maryland on-farm processors, followed by a discussion of how local governments can better facilitate these activities. However, as these rules are complex and subject to change, when in doubt the reader should contact MDA or the Maryland Department of Health and Mental Hygiene. (DHMH)

Existing Regulatory Responsibilities

The DHMH Office of Food Protection and Consumer Health Services (formerly the Community Health Administration) has oversight and licensing responsibilities for the state's on-farm food processors. The exception to this rule is in regards to those farmers that process limited numbers of their own eggs, poultry, rabbits, and bison, in which case they are regulated by MDA. Located within DHMH's Infectious Disease

and Environmental Health Administration, the Office of Food Protection works to ensure that the people and facilities used to process the foods are meeting certain health and safety requirements, licensing on-farm processors and farmers' market vendors according to the food items involved.

MDA is the agency responsible for inspecting and certifying for food safety any eggs, as well as limited numbers of poultry, rabbits, and bison processed on-farm, and is involved with DHMH in training on-farm processors in food safety. Additionally, MDA's Animal Health section works to prevent, diagnose, and trace any animal diseases that are transmissible to humans, while MDA's State Chemist section regularly tests feed grains and other inputs used in animal agriculture. The State Chemist also inspects and tests for pesticide residue for fruits, vegetables and other products destined for human consumption. MDA's Food Quality Assurance Program offers a voluntary Good Agricultural Practices program whereby farmers adhere to practices to minimize the microbial contamination of fruits and vegetables.

At the federal level, the United States Department of Agriculture (USDA) along with the United States Food and Drug Administration (FDA) has authority over interstate commerce, ensuring the safety of any food sold across state lines. USDA's Animal and Plant Health Inspection Service (APHIS), along with MDA, is responsible for preventing the spread of animal-borne illnesses that are transmissible to humans. USDA's Food Safety and Inspection Service (FSIS) meanwhile, is responsible for ensuring the safe and sanitary slaughter and processing of animals. Meats, with the exception of limited numbers of poultry, rabbits, and bison, must be processed at a facility staffed with a full-time FSIS inspector who must be present when any slaughtering and processing occurs. MDA also works through USDA's Agricultural Marketing Service (AMS) to administer a voluntary quality grading, certifying, and inspection program that earns the processor a USDA-grade shield of approval. The FDA has broad authority to ensure that food remains contaminant free (including the pasteurization of milk) and works with and through MDA's State Chemist and Food Quality Assurance Program.

At the local level, local health departments work to enforce existing state and federal regulations and can and do adopt additional regulations related to food safety. On-farm processors are also subject to local building, food, environmental, planning and zoning regulation. As part of its permit review process, DHMH will not approve an on-farm processing license if the farm does not have local approval.

Non-Animal Products

Farmers may process and sell a variety of food products on-farm under a number of different licensing and inspection arrangements, local planning and zoning requirements permitting. It should be noted that for the sale (on-farm or off) of raw, uncut fresh fruits and vegetables that have not been made ready for human consumption, no licensing requirements apply. It should also be noted that for sales of any non-animal product that are over $40,000, a DHMH commercial food processing license is required, which necessitates a commercial kitchen and professional processing facilities.

Under state law, and not unlike bake sales, non-potentially hazardous baked goods (those without cream, cheese, custards, or other animal protein toppings and fillings), canned naturally acidic jellies, jams, preserves, and certain fruit butters can be processed in a home kitchen and sold on-farm or at farmer's markets without a license, provided that sales are less than $40,000 annually. However, to allow these same foods to reach a wider consumer base, DHMH issues an on-farm home processing license that also allows for sales to restaurants or retailers, provided that annual sales are still under $40,000. Outlined in COMAR 10.15.04.19 (www.dsd.state.md.us/comar/comarhtml/10/10.15.04.19.htm), the on-farm home processing license permits the foods described above to be processed and then sold to restaurants and retailers without the need for a commercial kitchen, provided that the farmer has undergone the training required by the license. This license is also needed for any farmers processing acidified canned goods (products such as salsa and canned pickles that have had acid added),

dried foods, and honey that has had flavors added, regardless of whether these products are sold on-farm or off. Additional permitting is required for the sale of these items at farmers' markets.

On-farm processors licensed under the on-farm home processing license must complete an 8-hour training course covering topics including sanitation, cross-contamination controls, and food security, and are inspected by DHMH along with MDA. Additional formal training at a qualified university may be required for certain potentially hazardous acidified canned goods, including pickles and salsa. This training can be expensive however, especially for farmers looking to process limited quantities of these items. A further impediment to the on-farm processing of low acid foods/acidified canned goods is that for each recipe, the farmer needs the approval of an FDA-certified processing authority. Processing authorities are generally private contractors who charge per recipe, with each recipe approval costing several hundred dollars. Furthermore, any changes with regards to final product quantity requires the purchase of a new recipe approval, as ingredient quantities have changed. For farmers who are not processing large numbers of items, these costs can be prohibitively expensive.

For more information about. . .

- DHMH's Center for Retail Food, Plan, and Process Reviews: ideha.dhmh.maryland.gov/OFPCHS/plan-review.aspx. Or call: 410-767-8400
- MDA's Food Quality Assurance Program: www.mda.state.md.us/feed-food_safety-grading/food_qual_assur/index.php. Or call: 410-841-5769
- A list of the specific licensing requirements for on-farm food processors as they pertain to particular food processing activities: www.mda.state.md.us/pdf/valueaddedfood.pdf
- A document that outlines the foods that can be processed on-farm and for food type definitions (acidified, etc.): cha.maryland.gov/ofpchs/pdf/FARM_foods_definitions.pdf
- A document that outlines the process that must be followed for farmers wishing to process foods on-farm: cha.maryland.gov/ofpchs/pdf/OnFarm_Food_Processing_Licensing_Process.pdf

Red Meats

For those farms wishing to process red meats, an on-farm home processing license is not sufficient, and the processor will need to be certified and inspected according to COMAR 10.15.04.21 (www.dsd.state.md.us/comar/comarhtml/10/10.15.04.21.htm), which outlines how various meats are to be inspected. Unless an entire animal is purchased for meat by a consumer, any cattle, sheep, swine, goats, horses, mules, and other equine must be slaughtered and processed under federal rules which require that a USDA-FSIS inspector be on-site throughout the process. As a result, any farmers that wish to sell cuts of meats (rather than entire animals) must send these animals to often-distant processing facilities that will process the animals under USDA-FSIS supervision and send the meats back to the farm. Any resulting meats stored on the farm for sale must be kept in a commercial freezer, and the farmer must obtain an on-farm home processing license to do so, which also allows for the sale to retailers, restaurants, and wholesalers off the farm. Additional permitting is required for the sale of these items at farmer's markets. In an attempt to cut down on processing and transportation costs, one solution proposed by Maryland farmers is a mobile processing service which will travel to farms in the company of a USDA inspector, slaughtering and processing animals on-site. However, any on-farm facilities used must meet strict USDA-FSIS commercial requirements, with such facilities unavailable on most farms.

For more information about. . .

- MDA's Food Quality Assurance Program: www.mda.state.md.us/feed-food_safety-grading/food_qual_assur/index.php. Or call: 410-841-5769
- Specific licensing requirements for on-farm food processors as they pertain to particular food processing activities: www.mda.state.md.us/pdf/valueaddedfood.pdf

Rabbits, Poultry, and Bison

In the case of rabbits, poultry, and bison, a federal exemption allows for the small-scale processing of these animals without the need for a USDA-FSIS inspector to be on-site. The exemption requires that all meat be sold within the state and that in the case of poultry, fewer than 20,000 animals per year are processed (this cap does not apply to rabbits or bison). Only animals that were raised on the farm can be slaughtered, in a manner prescribed by federal regulation, and labeling is also required noting the federal exemption. This means that on-farm processing can take place without the need for any license, provided all animals are sold on-farm. Sales of these products can also take place off the farm, provided the farmer has undergone training to become a MDA-certified processor.

A farmer who has been certified as a processor through MDA is able to sell their rabbits, poultry, and bison off the farm. This MDA certification allows for sale to restaurants, grocers, and wholesalers without the need for a DHMH or local health department processing license. Inspections by the state and local health departments will be carried out at the retail or wholesale level. MDA-certified processors are also able to deliver directly to consumers without any health licenses. For those farmers wishing to sell rabbit, poultry, and bison meat at a farmers' market, additional permitting is required. The MDA certification program is carried out in conjunction with the University of Maryland, and requires training in areas such as animal diseases, safety, and sanitation, with annual inspection required.

For more information about poultry, rabbit, and bison processing, see MDA's Food Quality Assurance Program: www.mda.state.md.us/feed-food_safety-grading/food_qual_assur/poultry_rabbit/index.php. Or call: 410-841-5769

Eggs

MDA's Egg Inspection Program ensures egg safety through enforcement of the Maryland Egg Law (www.mda.state.md.us/pdf/egg_law_synop.pdf), requiring that all farmers selling eggs in Maryland register with MDA annually and submit information that qualifies their flock as meeting a Salmonella Enteritidis risk reduction plan. Such plans include USDA-APHIS' National Poultry Improvement Plan or participation in MDA's Egg Quality Assurance Plan. Regular inspections are performed to ensure that eggs meet the standards established for quality, size, refrigeration, microbial and physical contamination, labeling, and record keeping. Portions of the labeling, record keeping, and registration requirements were developed to provide traceability in the event of any problems with the eggs.

For more information, about MDA's Inspection Program: www.mda.state.md.us/licenses_permits/food/index.php. Or call: 410-841-5769

MDA also administers the **USDA-Agricultural Marketing Service's (AMS) Poultry and Egg Grading Program** to ensure that eggs are fresh, clean, and free from de-

fects and that poultry is free of bruises, feathers and other defects. Eggs and poultry produced under this program are identified with USDA's grade shield, and can be traded on a uniform basis coast to coast and overseas, by buyers and sellers who use official USDA standards and grades. MDA employees are licensed by USDA-AMS and perform grading and certification services for poultry and eggs throughout Maryland. All product identified with the USDA grade shield is produced under the continuous supervision of a licensed grader.

For more information about MDA's Poultry and Egg Grading Program: www.mda.state.md.us/feed-food_safety-grading/food_qual_assur/grading/poultry_egg_grading.php. Or call: 410-841-5769

MDA also administers the **Egg Quality Assurance Plan**, a voluntary program that works alongside the Egg Inspection and USDA grading programs to implement additional management and monitoring practices that ensure the quality and safety of eggs marketed under the program. Eggs that are produced, processed, and packaged under the Quality Assurance Plan guidelines are eligible to be identified with the Maryland's Best logo. MDA provides oversight, technical advice, and compliance inspections for this program, with the egg industry paying the inspection and testing costs.

For more information about MDA's Egg Quality Assurance Program: www.mda.state.md.us/feed-food_safety-grading/food_qual_assur/egg_qual_assur/index.php. Or call: 410-841-5769

For a list of the specific licensing requirements for on-farm food processors as they pertain to particular food processing activities: www.mda.state.md.us/pdf/valueaddedfood.pdf

Dairy Farms and On-Farm Dairy Processing

The Maryland Department of Health and Mental Hygiene's Center for Milk Control has licensing and inspection responsibilities for all of the state's dairy farms as well as any farms that process dairy products on the farm. The Center ensures the safety and sanitation of the milk and the facilities and equipment used to produce or process it. For any dairy farms that want to start on-farm processing, the Center issues a Dairy Processing Plant permit, which is wholly separate from the on-farm processing license (needed for products other than dairy) issued by DHMH's Center for Retail Food, Plan, and Process Reviews. The Center for Milk Control is responsible for evaluating processing plans according to factors such as equipment, sanitation, facility construction, transportation considerations, and the processing process itself. They also ensure that any local permits or permissions are obtained prior to the plan's approval.

For information about DHMH's Center for Milk Control: ideha.dhmh.maryland.gov/OFPCHS/milk.aspx Or call: 410-767-8429

Farmers' Markets

For those farmers who are selling raw, unprocessed fresh fruits and vegetables at farmers' markets, no DHMH or local food service license is needed. Raw unprocessed fruits and vegetables are those that have not been washed (incidental washing during harvest is acceptable), cut, or otherwise made ready for immediate human consumption. Similarly, and not unlike bake sales, no license is required for farmers' market sales of non-potentially hazardous baked goods, canned naturally acidic jellies, jams, preserves, and certain fruit butters made in private home kitchens. Approved foods can be found in COMAR 10.15.03.27 (www.dsd.state.md.us/comar/comarhtml/10/10.15.03.27.htm). A farmer may also sell shell eggs at a farmers' market without a license if they are registered with MDA. A permit is also not needed for a farmer that delivers prepackaged foods to fill an order for a consumer.

For those potentially hazardous foods that were produced by a farmer under a DHMH on-farm home processing license (such as acidified canned goods), or for products that have been inspected, licensed, or certified for food safety by MDA (poultry, rabbits, bison), DHMH issues a Producer Mobile Farmers' Market retail license to vendors. This license also allows for the sale of meats processed under USDA-FSIS inspection and stored on-farm according to DHMH regulations. The Producer Mobile retail license eliminates the need for the farmer to obtain a Food Service Facility license from each local health department, as the Mobile license is valid at farmers' markets statewide and supersedes any local health department licensing for farmers' markets. This prevents the farmer from having to get multiple Food Service licenses with varying re-

quirements for each county or municipality in which they sell at farmers' markets.

The Producer Mobile license is good for one year and DHMH, along with MDA, is required to inspect each licensee yearly. Local health departments are responsible for enforcement of the license provisions. If a farmers' market vendor is selling prepared foods other than those covered by the Producers Mobile license (ie. prepared meals), then a Food Service license is required. The legislation enabling the mobile retail license can be found here: mlis.state.md.us/2010rs/chapters_noln/Ch_246_sb0198T.pdf.

For information about . . .

- DHMH's Center for Retail Food, Plan, and Process Reviews: ideha.dhmh.maryland.gov/OFPCHS/plan-review.aspx. Or call: 410-767-8400
- MDA's Food Quality Assurance Program: www.mda.state.md.us/feed-food_safety-grading/food_qual_assur/index.php. Or call: 410-841-5769

Achieving Food Safety

With so many entities and rules involved, it should come as no surprise that confusion has arisen regarding who has oversight responsibility for each type of activity. Although food safety is regulated at the federal and state level through the various licensing requirements, additional food safety regulations are also promulgated at the local level. In addition to ensuring health and safety standards, it is important for local officials to understand how any additional local policies might conflict or harmonize with existing federal and state regulations, or those required by health officials in other counties. Farmers may market directly to restaurants or other retailers in a number of different counties. Conflicting regulations amongst counties can make direct marketing a difficult endeavor and can also create additional work for county health departments that may already be understaffed.

Of equal importance is how local health departments might interpret existing state or federal health and food safety rules and regulations that they may be required to enforce. On-farm processing and direct marketing are newer activities which the state has recently moved to accommodate through new regulations. As a result, issues of interpretation and unfamiliarity with both regulations and processing activities may arise. Therefore, to keep abreast of changes in regulation, local health departments should remain in continual communication with MDA, DHMH and their local Agricultural Marketing Professional (AMP). These officials will be familiar with how certain state and federal regulations apply to the particular types of on-farm food processing or direct marketing that local farmers are trying to engage in, and likely have experience with similar issues that have arisen elsewhere.

For local health departments and other officials involved in overseeing on-farm processors, it is also very helpful to become familiar with the farming and food processing operations themselves. The local AMP is an excellent resource who can provide valuable insight and facilitate site visits either in-county or with other AMPs to similar operations located elsewhere in Maryland. Finally, it should also be noted that most farmers processing food on their farms are also feeding those foods directly to their own families. This pressing need for self-regulation provides perhaps the greatest incentive of all to ensure safe and sanitary processing, an incentive that may not exist at large slaughter houses and processing plants.

For a list of the specific licensing requirements for on-farm food processors as they pertain to particular food processing activities: www.mda.state.md.us/pdf/valueaddedfood.pdf

Additional Resources for Food Safety

For more information about. . .

- MDA's Food Quality Assurance Program: www.mda.state.md.us/feed-food_safety-grading/food_qual_assur/index.php. Or call: 410-841-5769
- DHMH's Center for Retail Food, Plan, and Process Reviews: cha.maryland.gov/ofpchs. Or call: 410-767-8400
- DHMH's Center for Milk Control: cha.maryland.gov/ofpchs. Or call: 410-767-8429
- County Ag Marketing Professional through the University of Maryland's Rural Enterprise Development Center's Resource Map: mredc.umd.edu/MarylandMap.html
- What county health departments are doing regarding food safety: www.dhmh.maryland.gov/dhmh/org-lhds.html
- Foods that can be processed on-farm, with definitions for food types (acidified, etc.): cha.maryland.gov/ofpchs/pdf/FARM_foods_definitions.pdf
- The process that must be followed to process foods on-farm: cha.maryland.gov/ofpchs/pdf/OnFarm_Food_Processing_Licensing_Process.pdf.
- The University of Maryland's Department of Nutrition and Food Science, Cooperative Extension: www.nfsc.umd.edu/extension/index.cfm
- University of Maryland Extension food safety resources: extension.umd.edu/nutrition/index.cfm
- For information on acidified canned foods, visit the FDA at: www.fda.gov/Food/FoodSafety/Product-SpecificInformation/AcidifiedLow-Acid-CannedFoods/EstablishmentRegistrationThermalProcessFiling/Instructions/ucm2007436.htm

Facilitating Workforce Housing

Any farmers needing to employ seasonal foreign laborers through the H-2A visa program, must provide housing for the workers. However, local regulations that restrict the number of unrelated people living together, or that stipulate the same water and septic requirements for residential houses as for bunk houses, can often make building new housing for seasonal workers prohibitively expensive. These workers are generally brought in only for a few months out of the year (harvest season) and the facilities are often only used at night. Therefore, any bunkhouse or other structure built for laborers will inherently need to house unrelated persons and will have lower water and septic usage rates than ordinary housing.

To facilitate workforce housing, local governments should first seek to understand the federal and state regulations already in place. To describe the regulatory environment, housing provided through the H-2A program is regulated according to standards set by the U.S. Department of Labor and the U. S. Occupational Safety and Health Administration. The Maryland Department of Labor, Licensing and Regulation's (DLLR) Agricultural Employers and Workers division is responsible for ensuring that workforce housing meets the federal standards, while the State Fire Marshall and the Maryland Department of Health and Mental Hygiene's Office of Food Protection and Consumer Health Services have responsibility over building fire safety, and living conditions, respectively.

DLLR's Agricultural Employers and Workers division can provide more information on how certain regulations impact the ability of farmers to provide workforce housing. Upon understanding the context, local governments should consider looking at any local ordinances that might be unintentionally burdensome in this regard, and should work with farmers to develop reasonable workforce housing standards that will allow them to access the labor they need during the growing season.

For information about . . .

- Agricultural Employers and Workers section at the Maryland Department of Labor Licensing and Regulation: www.dllr.md.gov/employment/agempworker.shtml. Or call: 301-393-8218.
- The Office of Food Protection and Consumer Health Services' Center for Community Services at the Maryland Department of Health and Mental Hygiene: ideha.dhmh.maryland.gov/OFPCHS/Default.aspx Or call: 410-767-8419.

For more information about. . .

- The State Fire Marshal's Office: www.firemarshal.state.md.us. Or call: 410-836-4844
- Local offices of Building Inspection: mdcodes.umbc.edu/dhcd/amendments/bcode/amend04.htm
- OSHA's temporary labor housing standards: www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=9791

Avoiding and Responding to Land Use Conflicts Between Neighbors

The rapid development of Maryland's farmland has brought many new residents who are unfamiliar with agricultural operations into areas where there are working farms. New residents may be surprised at some of the smells and noises that accompany farming operations, especially if the realtor did not provide full disclosure of what to expect. Similarly, the trend towards diversifying farm operations may result in new on-farm activities that neighbors have a harder time getting used to. Every year, many conflicts needlessly result in litigation that often leaves neither party completely satisfied. Additionally, these cases can cost the state, farmers, and local communities hundreds of thousands of dollars while tying up the legal system. Listed below are some potential policy ideas that counties may want to consider to avoid land use conflicts, as well as information regarding current programs in place at the state level.

Realtor Disclosure

Many problems between farmers and their new non-farming neighbors arise due to unfamiliarity with the realities of farming operations. Urban residents, seeking the peace, quiet, and comfort of the countryside, may move into close proximity to a working farm and be surprised when summer rolls around. An idyllic lifestyle might be disrupted by tractor noise, slow-moving equipment, dust, and odors. One potential

tool to help inform new residents about what to expect when moving close to farmland, is to require that realtors provide full disclosure of potentially unpleasant farming activities at the front end of a home sale.

Realtors should explain the potential quality of life impacts of agricultural activities and farmers' protections provided under the state and/or local "right to farm" laws. This disclosure could be included as part of the closing package, in hopes of preventing legal action down the road against a farmer engaging in activities that a neighbor had full knowledge of upon their home purchase. A similar disclosure currently exists for residences that are located in close proximity to airports. When these types of agricultural disclosures are provided, potential purchasers could be given a certain time period to change their mind about the purchase and withdraw their offer.

Reverse Setbacks

Another mechanism that can prove useful in avoiding conflict amongst neighbors is a reverse setback requirement for developers. A reverse setback requires that developers incorporate a certain number of feet between the farm's property line and the proposed residences as a buffer zone to insulate the eventual residents from the farming operations occurring next door. This can have the benefit of shielding unsuspecting new neighbors from unpleasant smells, dust, noises, and other potentially bothersome activities. Similarly, developers can incorporate natural barriers, such as the planting of certain bushes and tree types along property lines, which can be effective in filtering dust and odors.

Facilitated Meetings

Land use decisions can often be contentious and emotional affairs due to the high stakes involved. Zoning appeals and other land-use decisions might involve people's homes, their livelihoods, and the amicable relations with their neighbors. They can also be highly personalized due to very particular circumstances that

might not be easily planned for or addressed by an undiscerning law. Such particularities can also mean that county councilors, who may not fully understand the circumstances of a situation, are forced to make decisions in the heat of an emotionally-charged debate with perhaps incomplete information.

One very useful tool to use in these situations is to hold "facilitated meetings" or "facilitated hearings". Facilitated meetings are, in effect, problem-solving sessions, guided by a trained facilitator who works with various stakeholders as a neutral 3rd party to resolve land-use or other decisions prior to public hearings. The goal of facilitated meetings is to avoid the emotionally-charged atmosphere often present in public council meetings and hearings, and to reason through particular situations.

Facilitated meetings can be a great tool for brokering community decisions, as they allow all parties to work together in a collaborative manner in order to find solutions. This approach not only helps different sides to better understand each other, but helps decision makers make more informed decisions. The outcome of such meetings might involve presenting council members with a number of viable options or compromises to address a situation, instead of a winner-take-all decision benefitting one side or the other.

For information about facilitated meetings through MDA's Agricultural Conflict Resolution Service, email: MarylandACReS@mda.state.md.us. Or call: 410-841-5770 or toll-free at: 800-492-5590.

Mediation

Using similar methods as facilitated hearings, mediation is a process that helps private citizens resolve disputes without litigation. Maryland's Right-to-Farm Statute (Maryland Annotated Code, Courts and Judicial Proceedings Article, Section 5-403) stipulates that a person may not bring a nuisance action against an agricultural operation in any court until a local mediation agency has first heard and made a decision regarding the complaint. If there is no local agency established to hear the complaint, the complainant must instead work through the State Agricultural Conflict Resolution Service. Mediation is one way to help both sides work together to find a solution and avoid the costs and aggravation of taking any complaints to court. However, due to the courts' unfamiliarity with the statute's requirement, or the lack of a forum for mediation in a particular county, mediation does not always happen. Therefore, local governments should become familiar with the state's mediation program or establish a Reconciliation Board of their own, ensuring that it employs neutral mediators who are professionally trained in dispute resolution.

For those counties that do not have established Reconciliation Boards, the Maryland Department of Agriculture's Agricultural Conflict Resolution Service (ACReS) will provide a trained 3rd party mediator to assist with dispute resolution for no to low cost. Administered by MDA, ACReS is the USDA-certified agricultural mediation program for Maryland, and has a good track record of assisting in the resolution of disputes. Of the cases that the state's mediation program had heard through the first half of 2010, 84 percent have been successfully mediated – of the 28 cases brought forward, 4 were not settled.

Right to Farm Laws

The state and many county governments have "right to farm" ordinances that provide some protection to farmers from legal actions aimed at disrupting their normal agricultural operations. However, some of these laws were passed when agriculture in Maryland looked very different. Value-added operations, wineries, on-farm processing, agritourism, and other activities might not have been considered by farmers as a means of maintaining profitability and therefore were not widespread. As a result, these activities might not have been defined in county zoning and right to farm ordinances as agricultural activities, meaning that there might be little legal protection for farmers involved in these activities, if neighbors object.

To provide context, the state right to farm law does not specifically identify particular value-added operations, but can provide some protection for farmers during nuisance law suits brought by private citizens. It states that if a farmer is in compliance with all federal, state, and local ordinances, and if the farm has been in operation for one year or more, then normal farming operations cannot be deemed a public or private nuisance. Additionally, this law states that a person may not bring a nuisance action against an agricultural operation in any court until a mediation agency has first heard and made a decision regarding the complaint. The law can be found in the Maryland Annotated Code, Courts and Judicial Proceedings Article, Section 5-403.

Local governments should examine their right to farm, agriculture, and zoning ordinances to see which activities are currently defined as agriculture, and where updates may be needed. To accommodate the changing face of Maryland agriculture, value-added activi-

ties such as on-farm processing, agritourism, and farm wineries should be included with more traditional farming activities. Definitions should also encompass horse farming and equine activities, tree farming, beekeeping, aquaculture, and the like. Defining these activities as agriculture will help provide clarity with regards to land use decisions.

Right to farm laws should include provisions that any land use disputes should be directed first through a local reconciliation board, if available, or the state's mediation process prior to any court proceedings. Establishing a local Reconciliation Board in the ordinance can be of great benefit. Similar types of mediation programs already exist in a number of counties and municipalities (Community or Human Relations offices/commissions in some counties), dealing with other types of disputes, so these existing institutions might be able to be utilized for agricultural dispute resolution as well. Maryland's Department of Agriculture is willing to provide guidance/comments regarding reasonable and effective county right to farm ordinances if a local government is looking at updating their own.

For more information about mediation: www.mda.state.md.us/acrs/index.php. Or email at: MarylandACReS@mda.state.md.us. Or call: 410-841-5770 or toll-free at: 800-492-5590.

For examples of how mediation can apply to real-life agricultural disputes: www.fsa.usda.gov/Internet/FSA_File/agsucces_0426.pdf

Outreach and Education

Perhaps the most useful tool of all is simple engagement and dialogue between local officials, communities, and farmers to ensure that all sides understand each other, regardless of the issue. One of the main hurdles that MDA routinely encounters is a general lack of understanding between farmers and non-farmers. Agriculture has changed tremendously in recent years and many communities may be unfamiliar with the context of modern agriculture. Similarly, farmers may not understand why local decisions are being made and how they can help inform those decisions.

Education and outreach can go a long way in starting the constructive dialogue that is the basis of any informed decision making, and at the very least, it will leave parties feeling that their concerns have been heard. It can take place in the form of regular farm tours, listening sessions, and informational presentations for policy-makers and officials, as well as farmers. Agricultural education and events at local schools are also good venues for informing students and teachers of where their food comes from, and for showing how agriculture can still be a viable profession. Such outreach and education efforts can also help communities better understand the environmental efforts and requirements facing their farmers, what on-farm processing entails, and how agriculture is changing in Maryland. Also important, is dialogue between and amongst counties, to better understand what other counties are doing with regards to agriculture, and to both facilitate local agricultural production and avoid putting county farmers at a competitive disadvantage to farmers elsewhere.

Local Agricultural Marketing Professionals (AMPs) can be a wealth of knowledge regarding local agricultural production. For contact information for each county's AMP, see the University of Maryland's Rural Enterprise Development Center's Resource Map: mredc.umd.edu/MarylandMap.html

The Maryland Agricultural Education Foundation is a non-profit organization established by the state to promote education about agriculture. It regularly holds educational events in schools and communities: www.maefonline.com. Call: 410-939-9030.

The Maryland Farm Bureau can provide information on policy issues and concerns of Maryland farmers, and is a good resource for local decision makers: www.mdfarmbureau.com. Call: 410-922-3426.

The Rural Maryland Council brings together federal, state, county and municipal government officials, as well as representatives of the for-profit and nonprofit sectors to collectively address the needs of Rural Maryland communities. The Council provides a venue for members of agriculture and natural resource-based industries, health care facilities, educational institutions, economic and community development organizations, for-profit and nonprofit corporations, and government agencies to cross traditional boundaries, share information, and address the special needs and opportunities in Rural Maryland: www.rural.state.md.us. Call: 410-841-5772.

The Harry Hughes Center for Agro-Ecology is another valuable educational and outreach resource: agroecol.umd.edu/

For a comprehensive list of organizations involved with Maryland agriculture: www.marylandagriculture.info

The University of Maryland

The University of Maryland's College of Agriculture and Natural Resources is also an excellent resource for communities, as it has conducted a variety of informative studies and research regarding agriculture in the state. The University of Maryland Extension (UME) has offices in each county and can also be an excellent tool in helping local leaders better understand the agricultural operations in their counties and how they are changing. UME educational programs and problem-solving assistance are available to citizens and are based on the research and experience of land grant universities such as the University of Maryland, College Park. Four major impact areas serve as the major programmatic initiatives that UME will direct resources to accomplish and include:

1) local food and agriculture systems;
2) environment and natural resources;
3) healthy living; and
4) resilient communities.

For more information about . . .

- University of Maryland's College of Agriculture and Natural Resources: agnr.umd.edu/
- University of Maryland Extension offices in each county: extension.umd.edu/

Conclusion: Understanding the On-Going Changing Context of Agriculture

Maryland's agricultural producers are a strong and vibrant part of the state's economy. However, as farmland has disappeared and competition with producers in other parts of the globe has increased over the past several decades, the face of Maryland agriculture has changed. Numerous challenges have required new modes of operation and new ways of doing business. Our farmers, however, have shown their resiliency and have continually found innovative ways to keep farmland productive and profitable. As the face of Maryland agriculture continues to evolve, it is critical that decision makers and neighbors understand the changing context in which their farmers operate, and how communities can help create an industry that is ready to meet the food production challenges of today and tomorrow.

This toolkit has shown some of the ways that agriculture has changed in recent years and how farmers have responded. It has also shown how communities can help support farmers as they continue to adapt to new realities and the benefits for everyone of doing so. Farmers need a strong partner in their communities and local governments that both understand and support agricultural production. Essential to Maryland's continued strength as a food and fiber-producing state is clear communication, comprehension, and collaboration amongst stakeholders regarding the emerging issues surrounding Maryland agriculture. Although the toolkit does not have all the answers, it aims to promote understanding of the issues as talking to the right people can help us all to better work together towards creating communities that support both profitable agricultural production and a high quality of life.

The Governor's Intergovernmental Commission for Agriculture

Vision and Mission:
The Commission shall work to promote the economic profitability of agriculture in the state by ensuring that all appropriate state agencies work in a cooperative, coordinated manner with local government and industry groups in planning, implementing, overseeing, and evaluating intergovernmental initiatives related to agricultural affairs of the state.

GICA members are appointed by the Governor on the recommendation of the Secretary of Agriculture.

Chair	
Secretary Earl F. Hance	Maryland Department of Agriculture
Members	
Kenneth Bounds	MidAtlantic Farm Credit
Cheryl D. DeBerry	Western Maryland; Ag Specialist, Garrett County
Faith Elliott-Rossing	Queen Anne's County Department of Economic Development and Agriculture
Jerome R. Faulring	Maryland Agricultural Commission
Vanessa Finney	Maryland Nursery and Landscape Association
Rodney Glotfelty	Maryland Association of County Health Officials
Secretary John Griffin*	Maryland Department of Natural Resources
Secretary Richard E. Hall*	Maryland Department of Planning
Secretary Christian Johansson*	Maryland Department of Business & Economic Development
Phyllis Kilby	MARBIDCO
Daniel T. Magness	Central Maryland; Dairy Producer
Thomas Mattingly, Sr.	Maryland Association of Counties
George Mayo	Maryland Agricultural Education Foundation
James L. McCarron, Jr.	Maryland Municipal League
Vanessa Orlando	Rural Maryland Council
Gail Webb Owings	Maryland Association of County Planning Officials
Pamela Saul	Rolling Acres Farm, Inc. (Montgomery County)
Secretary Joshua Sharfstein, M.D.*	Maryland Department of Health and Mental Hygiene
Jim Steele	Maryland Farm Bureau
Dr. Cheng-i Wei	UMD College of Agriculture and Natural Resources
Secretary Bob Summers*	Maryland Department of Environment
Gabe Zepp	Maryland Cattlemen's Association; Ag Specialist, Carroll County

*** Ex-Officio Members**

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Appendix — Maryland Agency Agriculture Ombudsmen
May 2011

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Governor Martin O'Malley
Lt. Governor Anthony G. Brown
Agriculture Secretary Earl F. Hance
Deputy Secretary of Agriculture Mary Ellen Setting