

GROWING OUR FUTURE

A Vision Plan for Sustaining Agriculture in Talbot County, Maryland

Approved by Talbot County Farm Bureau
April 2008

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Executive Summary

This Vision Plan for Sustaining Agriculture in Talbot County, Maryland, is the product of a collaboration organized by the Washington College Center for the Environment and Society with the assistance of the citizens, public officials, and farming interests of the County and conducted through the offices of Talbot County Cooperative Extension. The document reflects data gathered by a Steering Committee that first convened in November 2005, information presented by invited speakers at five public forums during 2006, and written and verbal comments and recommendations submitted by the general public throughout the project.

Talbot County agriculture today is conducted on 60% of the total land area of 171,000 acres. Large-scale grain farming that sells locally to the poultry industry accounts for 86% of the farmland; the remainder is managed by smaller operations that generate products for niche, organic, restaurant, and farmers' market sales. A major economic engine, farm products and sales by agriculture-linked industries account for more than \$200 million annually. Responses submitted at the public forums indicate that Talbot County citizens value agriculture most for its contribution to the economy, open space, quality of life, and the environment; these contributions ranked higher than fresh, local food. The status of agriculture is thus tied to features that define the Eastern Shore and its unique sense of place. Economic factors, especially low net profitability, are leading many farmers to sell their land for residential development. Talbot County farmland has decreased by more than 10% since 1982. The Vision Plan directly concerns ways in which farm profitability might be sustained or enhanced.

External "forces of change" are influencing Talbot County agriculture, among them: regional population growth due largely to immigration, market globalization, changing consumer food preferences, workforce dynamics, public environmental awareness (especially with regard to Chesapeake Bay), and increased energy costs. As these forces are beyond the control of farmers themselves, the recommended strategy is to take advantage of them in a proactive manner rather than rely solely on reactions against them through attempts to preserve farmland using conservation easements and zoning changes that do not directly address profitability issues.

The principal elements of the Vision Plan are as follows:

- Diverse, working landscape – Both large-scale grain and small-scale entrepreneurial operations should characterize Talbot County agriculture with an increased diversity of crops and products.
- Bioregional identity – View and identify Talbot County as part of the Eastern Shore bioregion; market Eastern Shore agricultural products through a regional brand that is recognized for high food quality, energy conservation, and environmental stewardship of Chesapeake Bay; use product identity preservation in a value chain that directly connects a consumer with the farm of origin.
- Energy sufficiency – Diversify large-scale operations by adding mixtures of alternative grains and grasses as crops whose biomass can be harvested as a source of heat and /or for local production of bio-ethanol; manage these crops to reduce nutrient runoff and create wildlife habitat; use similar approach on small-scale entrepreneurial operations that are transitioning to organic farming.
- Community support – Treat agriculture as an industry rather than just a kind of land use, and provide assistance as for other industrial development initiatives – low interest loans for beginning farmers, marketing assistance, health insurance; consider creating agriculture industrial zones; expand opportunities for off-farm employment and provide affordable housing for farm labor; enhance education opportunities for farmers to learn new techniques and marketing strategies.
- Environmental quality – Continue to adopt methods that reduce impact of farming on Chesapeake Bay; lobby legislators and federal/state agencies for modification of existing and future cost-share programs designed to sequester nutrients, reduce sediment runoff, and create wildlife habitat so that the crops can be managed and harvested for use as local energy sources.

The Steering Committee notes that a diversified, profitable agriculture industry will be better prepared to adapt to additional forces that are on the horizon, namely energy conservation, global climate change, and water availability.

The Vision Plan concludes with specific recommendations for getting started toward its implementation. The goal is to create a working landscape that will be passed to the next generation as an asset rather than a burden – an irreplaceable cultural, economic, and environmental resource for all people who call Talbot County home.

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Our Vision

It is our vision that agriculture will continue to contribute to the aesthetic beauty and quality of life in Talbot County as a diverse working landscape that is profitable for its farmers, recognized for its products, and compatible with the Chesapeake Bay environment that defines the Eastern Shore of Maryland. Further, we see agriculture and community as mutually supportive with farmers and citizens, assisted by their public officials, working together to sustain this economic, cultural, and environmental resource as an asset for the benefit of the next and future generations of all persons who will make this region their home and take pride in their commitment to growing our future.

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Introduction to the Future

“ . . . A country that may have the prerogative over the most pleasant places known, for large and pleasant navigable rivers, heaven and earth never agreed better to frame a place for man’s habitation.”

– Capt. John Smith, 1612

This Vision Plan for Sustaining Agriculture in Talbot County, Maryland, is intended to provide context for realizing the commitments made to conserving farmland in the current Talbot County Comprehensive Plan (adopted February 2005)¹. We especially applaud the input and personal effort nearly 100 citizens made through the regional advisory committees into the comprehensive planning process. This Vision Plan stands on their shoulders and we believe it to be fully compatible with their recommendations. We hope that it will provide the Talbot County Council, public officials, and citizens a blueprint for effective program implementation, informed action, and future planning over the next two decades.

Talbot County Agriculture Today

Agricultural use accounts for 102,358 acres, or 60.4% of Talbot County’s total land area of 169,388 acres (*Table 1*). Based on November 2006 property tax records, the County Economic Development Office reports 280 operating farms with an average size of 367 acres. Our largest single industry, agriculture contributed \$55.6 million to Talbot County economy in FY 2005. Talbot County 2005 estimates backward- (infrastructure) and forward- (value-added) linked industries account for an additional \$165 million, for a total agricultural contribution in excess of \$200 million annually. Farming itself is not a major source of employment, however, with only 266 persons identified as farm proprietors plus another 373 engaged in farm employment for a total of 639 persons, 7.2% of the labor force of 18,862 (Talbot County 2005). Talbot County 2005 asserts, “Today, the County’s farmland accounts for most of its open space and scenic character.” By far, the greatest influence on these is large-scale grain agriculture (corn, soybeans, wheat, barley) which constitutes 86% of working farmland (MDA 2006)². Virtually all grains grown here are sold locally on the Delmarva Peninsula to the poultry industry.

Despite the magnitude of agriculture as an economic enterprise, there are troubling signs about the long-term future of agriculture in Talbot County. Although losses have slowed in recent years, the number of farms has been steadily declining from 350 in 1982 to 280 at the end of 2006³. These losses represent consolidation of some enterprises into larger grain operations, but

¹The 2005 Comprehensive Plan will be referenced as “Talbot County 2005” hereafter.

²Maryland Department of Agriculture, “Agriculture in Maryland: Summary for 2005.” Referenced as “MDA 2006” hereafter.

³Talbot County 2005, and Economic Development Office. 2006 Talbot County economic analysis presentation to Talbot County Council, December 12, 2006.

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satellite imagery-based land use estimates conducted in support of Talbot County 2005 indicates that total farmland acreage is still decreasing at -0.5%, or -513 acres, per year. Most of these losses reflect conversion of farmland to low density residential development. The latest 2006 available data for land in farms, 102,358 acres, represents a 14% decrease since 1982.

Table 1. Talbot County land use (from Talbot County 2005, MDA 2006, and Talbot County Economic Development Office⁴).

Land Use (2000)	Acres	Per Cent
Farmland	102,358	60.4%
Forests	40,633	24.0%
Wetlands	4,637	2.7%
Extractive/Barren	207	0.1%
Developed	21,553	12.7%
Total	169,388	

Total water area: 129,798 acres
 Total shoreline: 600 miles

The causes farmland loss here and across the nation can be boiled down to two basic economic considerations: declining profitability and increasing uncertainty. Market value of production in the drought year of 2002 was down 31% relative to the USDA 1997 Census of Agriculture, and the average net cash farm income was only \$11,299 (USDA 2002). In contrast, recent global markets driven in part by increased biofuel production (ethanol and biodiesel) are resulting in projected high prices for corn (to \$4/bushel) and soybeans (to \$7/bushel) that are well above the average for recent years. Any income must be viewed against the large amounts of equity tied up in expensive equipment, the fact that grain farmers must rent additional lands to achieve net profitability, and the fact that prices are established by a global commodity market over which local farmers have no control through local forces of supply and demand. Talbot County is located in a region where land is in great demand for development; farmland sales currently bring in an average of \$18,000/acre, or even twice that amount if residential zoning permits greater housing density. These numbers are well in excess of the \$8,000-9,000 value per acre as cropland or pasture⁵. Zoning regulations that permit residential development at whatever density on farmland create equity for the present generation of farmers who someday may wish to cash in by selling their lands. Low profitability and high land prices, coupled with burdensome estate and inheritance taxes, are discouraging young persons from becoming farmers; the average age of a Talbot County farmer is 55.6 years (USDA 2002) and increasing. These circumstances all work to promote a continuing net decline in working farmland.

⁴Economic Development Office. *Ibid.*

⁵County Economic Development Office (Ibid.) reports total agricultural parcel value = \$1,173,661,930 with 102,358 total agricultural acres in use, giving an average value of \$11,466/acre.

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As Captain John Smith observed in 1612, the Chesapeake Bay constitutes a major influence in making this region “a place for man’s habitation.” Talbot County’s nearly 130,000 acres of water is almost equal to its land area, comprising 43% of the total county acreage. Along with Virginia, Pennsylvania, and the District of Columbia, Maryland is a formal signatory in the Chesapeake Bay Program, a voluntary agreement with the federal government to restore, and conserve, and protect the Bay and its irreplaceable living resources. Agriculture on lands within the Chesapeake Bay watershed is being conducted under an intense level of environmental scrutiny. As there is growing concern that the Chesapeake Bay Program is not meeting its goals of reducing nutrient pollution and restoring water quality, it is only realistic to assume that agriculture will be expected to play an even greater role than it does today in controlling pollution from non-point sources, *i.e.*, the working farmlands that constitute nearly a quarter of the total Bay watershed.

This picture of Talbot County agriculture today is a snapshot of a dynamic system in constant change. A great deal of that change in recent years has been negative, driven by such factors as declining profitability, market uncertainty, and rising land prices. As a planning document, Talbot County 2005 directly addresses the loss of agriculture by strengthening farmland protection and preservation programs “. . . through effective land use controls, reasonable incentives and innovative funding mechanisms . . .” It does so in part by identifying Designated Growth Areas surrounding incorporated towns where development will occur without consuming rural farmland. It further reaffirms commitments made in previous Comprehensive Plans by establishing the Agriculture Planning Area which “. . . includes the majority of the inland rural and agricultural lands . . .” in which any future residential development “. . . should be designed in such a way as preserve agricultural lands, woodlands, open space, environmentally sensitive resources, and Rural Character [sic]. Two new planning areas for Countryside Preservation and Western Rural Conservation have been created to focus efforts that limit residential growth on lands that are especially important to the County’s economy, environment, and rural character.”

As Talbot County 2005 acknowledges, the tools traditionally available to planners and elected officials are legal ones associated with zoning allocations and related decisions pertaining to permissible land use. Their efforts have been augmented by the activities of state and nonprofit organizations that together have placed nearly 24,000 County acres in permanent conservation easement. Laudatory as these efforts are, preservation of farmland by itself does not guarantee the preservation of farming as a profitable business enterprise. This vision plan is our collective attempt to augment such endeavors by considering additional economic, cultural, and environmental factors that affect the vitality of agriculture on the Eastern Shore. It is our hope that this vision will provide new perspectives and approaches that may be available to help ensure that Talbot County agriculture today will be a prelude to a viable Talbot County agriculture tomorrow.

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The Visioning Process

This vision plan, the culmination of a year-long endeavor, was undertaken as a component of a larger project, *Visioning for Sustaining Rural Communities on Maryland's Eastern Shore*, conducted under an award to the Washington College Center for the Environment and Society by Maryland Sea Grant in February 2005. After several months of preparation that included general fact-finding as well as informal discussions with citizens and county officials, the project convened a Steering Committee (Appendix 1) to conduct the visioning process itself. The goal has always been to develop a vision plan as a citizen-based endeavor for eventual presentation to public officials, businesses, and all people interested in sustaining a future for agriculture in Talbot County.

The Steering Committee was chaired by Ms. Shannon Dill, co-Director, Talbot County Cooperative Extension, with Dr. Wayne Bell, Senior Associate with the Center for the Environment and Society, as chief of staff. We first met as a group on November 2, 2005, to review and approve a work plan which has guided the project since then. After a series of private meetings, the project was opened to the general public through a series of four forums under the general theme, *Toward a Vision Plan for Sustaining Agriculture in Talbot County*, at the Historic Avalon Theatre in Easton. The forums had the following themes:

Forum I	April 3, 2006	Leelanau County, MI: Learning Lessons and Lessons Learned
Forum II	April 24, 2006	Sustaining Grain Agriculture: Energy and Value-added Opportunities
Forum III	May 22, 2006	New Markets, Niche Markets
Forum IV	August 6, 2006	Environmental Opportunities
Forum V	October 25, 2006	Vision Plan Draft.

Each forum featured presentations by panelists (*Appendix 2*) who were invited to discuss their own experiences with attempts to sustain agriculture, opportunities for developing and enhancing both large-scale and small-scale agricultural enterprises, and possibilities for taking advantage of this region's pervasive environmental awareness in securing a profitable future for farming in Talbot County. The 40-60 citizens who attended each forum were invited to contribute their own perceptions about agricultural issues and to participate in facilitated question and answer sessions with the speakers. All forums but Forum I were video recorded and subsequently shown on the Easton Cable Channel; the archived recordings are available for further editing and distribution.

The preliminary draft vision plan was presented and discussed at length at the fifth public forum. The draft was also posted to the web site of the Washington College Center for the Environment and Society⁶ and additional public comment invited over the next four weeks. Extensive written comments were received from 12 persons; many others offered ideas and recommendations at the public forum and subsequently during the comment period. The Steering Committee is grateful for all responses, each of which was considered in revising the draft. Growing Our Future truly has been a community endeavor.

⁶<http://ces.washcoll.edu>.

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Citizen Perceptions and Priorities

Each public forum included a series of written questions designed to identify citizen perceptions of Talbot County agriculture today as well as possible priorities for its future. Most insightful were opinions about the contribution agriculture makes to Talbot County (*Table*). Contrary to the expectations of many Steering Committee members, fresh food was not among the top three contributions that were identified. Rather, economic return, contribution to quality of life, and scenic beauty ranked highest.

Table 2. Citizen* perceptions on the contribution of agriculture to Talbot County**.

Number	Contribution
23	Economic return to local communities, state
21	Sense of community, rural character, quality of life; cultural diversity; connection with the land
19	Open space, beauty; scenic alternative to sprawl
12	Environmental protection, health of Chesapeake Bay; wildlife habitat
12	“Fresh, healthy” local food
3	Miscellaneous: Rural population makes for small schools Source of employment Source of “cheap” [sic] land for growth and development Tourism
61	Total responses received

*Responses received from 36 individuals; 23 were residents, 13 identified their occupation as farmer or farm-related.

**Persons were asked to identify up to 3 contributions in their own words; staff categorized similar responses together.

Our citizens apparently view agriculture as an activity that makes the Eastern Shore a special place in terms of community and environment. There is danger, however, if non-farmers have adopted what Richardson⁷ calls the “agrarian myth of pastoral landscapes peopled with friendly rural people living wonderful lives based on solid family values.” Agriculture is first and foremost an industry that must turn a profit if it is to be sustained. A second fallacy is that agricultural land is waiting to be “improved” by development as if that were a higher category of land use. We need to reassess our relationship with agriculture and to reestablish a connection between farmer/producer and citizen/consumer.

If Talbot County could take steps to better support its agricultural enterprise as an industry, agriculture could be expected in turn to enhance its contribution to community, quality of life and environmental well-being. Responses were more varied and harder to categorize when

⁷Richardson, J. 2002. *Partnerships in Communities: Reweaving the Fabric of Rural America*. Island Press.

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citizens were asked how Talbot County might undertake such support (*Table 3*). All of the responses favored action of some kind. In contrast with the results summarized in *Table 2*, “food” essentially tied for highest, suggesting that citizens themselves could become actively involved in supporting agriculture by patronizing a farmer’s market or otherwise “buying local,” establishing or reestablishing a more direct connection between producer and consumer. Equally ranked were a variety of creative ideas for providing economic assistance to farmers, with a special focus on facilitating the entry of young persons who are otherwise being priced out of farmland purchase. Next were a variety of legal measures to save farmland, presumably augmenting those already being implemented or under active consideration by state and local government. Equally ranked was a need for education at both the K-12 and citizen level⁸. A few citizens, perhaps stimulated by the subject matter of the public forums, looked toward cooperatives and other innovative programs in which farmers might participate.

Table 3. Citizen perceptions as to how Talbot County might better support agriculture.

Number	Action
22	Economic assistance: tax and medical benefits for farmers; programs for young farmers and new businesses; redirect subsidies to support reduced nutrient use; pay for equity loss on preserved or downzoned farmland; reduce/avoid costly regulations
20	Diversify into “food, not feed”; market and “brand” Talbot county products, assist with distribution; buy local
10	Implement government-based programs, including purchase of development rights, downzoning of rural areas, right-to-farm laws; implement Talbot County green infrastructure study
10	Education: projects in schools, community information initiatives, agriculture research/development center
8	Invest in new technologies such as local energy production and biofuels
5	Economic development: establish county/regional cooperative; establish county/regional position responsible for agricultural economic development
48	Total responses received

⁸Maryland Agricultural Commission. 2006. A Statewide Plan for Agricultural Policy and Resource Management.

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Because local food purchases can contribute to reconnecting farmer with consumer as well as enhancing farm income, we explored current citizen activities and perceptions in this regard (*Table*). While the great majority of respondents indicated a preference for buying local farm produce, a smaller number responded that they regularly buy from farmers’ markets and a similar number buy mainly from super markets. The local products they preferred constitute an eclectic mix, but there is a distinct message from these collective data that “Talbot produce [is] mainly a ‘food stand’ business.”

Table 4. Citizen activities and perceptions relative to “buying local” Talbot County produce.

Yes	No	Activity
18	1	Preference for local farm produce ¹
9	7	Preference for organic foods
11	5	Regularly buy from farmers’ market(s)
Number		
4		CSA member
9		Purchase food mainly from super market(s)
5		“Talbot produce mainly a ‘food stand’ business”
3		“Local restaurants do not serve Talbot produce”

¹Preferred products: strawberries (6), blueberries (1), sweet corn (9), tomatoes (5), melons (6), green vegetables (5), apples/peaches (3), eggs (5), cheese & dairy (6), chicken (5), beef/pork (8), wine (3), jellies/honey (1)

This assessment of Talbot County agriculture today has uncovered challenges and opportunities. We believe the principal challenge is enhancing and maintaining the profitability of farming as a business, viewing agriculture as an industry rather than just an alternative form of land use. The opportunities center around reconnecting agriculture and community with the expectation the connection will maintain if not enhance the region’s environment and quality of life. We view these two considerations as mutually interactive so that appropriate responses will be mutually supportive. We now proceed to construct a vision that can meet the challenge of profitability by taking advantage of new as well as currently available opportunities. The beneficiaries can be expected to be not only the farmers, but all citizens of Talbot County.

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Essential Concepts

“A working landscape is one that maintains and works to enhance the responsibility of private land owners, individually, to improve the land for successive generations of those who work it and, collectively, to pass on to each new generation a landscape that is a greater environmental asset than they received. Moreover, a working landscape is an irreplaceable cultural resource.”

– Royce Hanson, former chair, Maryland Environmental Trust, 2002.

Our approach to visioning is guided by two principles, as follows:

1. New perspectives are required because current efforts alone do not appear to be effective in sustaining Talbot County agriculture into the future.
2. We must be proactive rather than reactive, *i.e.*, take actions that will promote agriculture as an economically viable industry rather than institute regulations solely designed to prevent its decline.

We believe that most actions taken to date, no matter how well intentioned and apparently successful in meeting their goals, are reactive and do not address the fundamental challenge of the loss of farming profitability. A relevant example is preservation through downzoning, conservation easements, and other programs associated with reduction or removal of development rights from farmland. Although 24,000 acres of Talbot County farmland are permanently preserved for that purpose and another 14,523 acres are located in low density rural conservation districts, the fact remains that the agricultural enterprise continues to decline. Our guest presenters from Leelanau County, MI (Price, Mawby, Manigold; Forum I)⁹, who are grappling with similar concerns on a landscape dominated by fruit orchards rather than grain, have learned through experience that “Zoning [alone] will not save agriculture as we know it.” We applaud land protection measures as important but believe that they cannot be the only tools available to us for sustaining agriculture. We must adopt an approach that addresses the fundamental challenge of profitability. To that end, we have adopted three essential concepts that we believe provide the new perspectives and encourage practice solutions required by our guiding principles.

Working Landscape

Historians and ecologists alike recognize that most lands in the mid-Atlantic region and across the Chesapeake Bay watershed constitute a working landscape on which humans and their environment have interacted since before recorded history¹⁰. Native Americans first did so using

⁹Speakers heard during vision plan development will be referenced to public forum(s) in which they participated.

¹⁰See, for example, articles in Curtin, P.D., G.S. Brush, and G.W. Fisher [eds.] 2001. *Discovering the Chesapeake*. Johns Hopkins University Press.

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fire as a tool to clear land on a local scale for their limited agriculture and on a scale of many square miles to promote an abundance of game on recovering lands¹¹. By the time Captain John Smith arrived, the Delmarva Peninsula was not a trackless forest but a patchwork of woodlands interspersed with extensive grasslands and savannahs maintained by these periodic fires (Gill, Forum IV). While the colonists quickly adopted Native American crops and techniques for subsistence farming; it was not until after the American Revolution that the European moldboard plow was introduced onto this working landscape and large scale grain agriculture commenced. The working landscape has continued to change, from grain to orchards to truck farms supported by local and regional canneries. The fact that Talbot County agriculture is now dominated by grains sold locally to the poultry industry is part of an historic continuum in which humans have modified the land according to their needs and the land in turn has modified the region's civilizations and given it a unique blend of economics, history, and culture.

A working landscape concept treats people as an integral part of the complete system, not as external intruders, modifiers, degraders. Under such a concept words such as “restore” or “preserve” have less meaning than “sustain.” Royce Hanson's definition is a functional one; a landscape that “works” is one that is passed to future generations as an asset, not as a burden. While we cannot dictate how the next generation will use our present working landscape, if we are successful in sustaining it that generation will be less burdened with efforts needed to keep it truly working and better served to profit from its productivity and enjoy its beauty.

We believe that agriculture is an essential component of Talbot County's working landscape, a landscape that also includes its fishing and forestry industries and its rural communities. We believe that loss of any of these working components will irretrievably alter the nature of that landscape. While this Vision Plan specifically addresses farming, all components of the working landscape are part of an integrated whole and we must not promote one in a manner that would be detrimental to the others. We believe that in creating a vision for the future, we are sustaining a cultural, economic, and environmental resource that will be an asset to those who would follow and prosper from the results of our commitment today.

Forces of Change

This is a relatively new concept when applied to community visioning, but private businesses have long used “forces of change” or “force field” analysis to optimize gains in the face of external factors that are working to limit their success¹². The analysis has two characteristics. First, it is an internal process in which a business' strengths for responding to change – its assets – are the primary focus, as opposed to concentrating on the negative consequences of change. Second, it is proactive, meaning that the analysis attempts to develop responses that as much as possible take advantage of change rather than reacting with attempts to prevent it. To do so requires careful identification of the outside forces at work (*e.g.*, changing consumer demands

¹¹Droege, S. 1996. Maryland, efficiency, and birds. Audubon Naturalist News, May.

¹²Wase, A. 2006. Forces of Change Analysis Applied to Community Visioning. Senior Thesis in Environmental Studies, Washington College.

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for a particular product) rather than a reaction to the consequences for the business (*e.g.*, reduced profits leading to layoffs). A successful force of change analysis could lead to redirection of existing assets (*e.g.*, a modified product more congruent with consumer demands) or, as a corollary, an augmentation of those assets (*e.g.*, a completely new product).

When applied to community visioning, forces of change analysis first requires an inventory of that community's assets, including its economic, social, cultural, and environmental strengths. Ideally, this inventory should be done internally through a process that involves both citizens and elected officials. It could be undertaken as part of the periodic comprehensive planning process required of Maryland counties and municipalities. Talbot County 2005 admirably serves this purpose; it clearly identifies the county's assets; some of those pertaining to agriculture are briefly set forth in the introduction to this Vision Plan. With regards to agriculture, the next step in a true forces of change analysis requires identification of those external factors that are affecting the status this enterprise in Talbot County. Based on what we learned from discussions and public forums, we discuss below what we feel are the most significant factors and summarize our findings in *Table 5*.

Population Growth

Talbot County's population grew by 2.5% during the period 2000-2003 to 34,670 persons¹³. Although the rate is less than the average for Maryland (4.0%), the consequences of that growth are cause for considerable concern. The force of change that is population growth can result in sprawl into productive farmland, leading to reactions such as downzoning of agricultural lands and farmland preservation programs through purchase/donation of development rights. However, identification of population growth itself – not its consequences in sprawl – as an external force of change leads to deeper insights into its nature. Current population growth is primarily the result of an influx of people, not an excess of births within the County. Many of these people are of an “active retirement” age. According to citizen responses at our public forums, such persons are attracted by the rural nature of the county as defined by its agricultural working landscape. They are a potential and growing market for “buying local” and reconnecting food producers with consumers. A second cadre is comprised of working class immigrants. These new citizens can augment the County's on-farm labor force for local product growth, harvest, and distribution. Immigrants also comprise a new and growing niche market for ethnic foods that has not been exploited by most rural communities. Our analysis thus identifies opportunities for enhancing the profitability of agriculture, the decline of which, rather than sprawl itself, is a primary reason for conversion of productive farmland to development.

Globalization

Globalization places local farmers, especially those that grow commodities such as grain, in direct competition with lower-cost world markets. One serious consequence is that the prices of such commodities are not readily subject to local supply and demand economics; farmers are unable to adjust their production acreage to take full advantage of market prices that are set by

¹³Easton *Star-Democrat*, April 13,2004.

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the Chicago Board of Trade according to global market factors. Another consequence of the distant separation of food producers and consumer is that distributors and other middle men receive much of a product's market value – only 2-5% of each dollar the consumer spends in the super market actually returns to the farm that grew the produce (Hall, Forum II). Globalization has contributed to the reduction of net farm profits to difficult levels. Average net farm income (gross income less production expenses) for Maryland was \$61,548 in 2005 (MDA 2006), but other expenses associated with farm operation can reduce net income per farm household to less than \$20,000 (Gardner¹⁴). In the face of such low profits, most farmers seek off-farm income for themselves, their spouses, and their eligible children to obtain health benefits and pay most of the household bills. Farmers also look to the equity that has accrued in their land and equipment to qualify for bank loans and as a source of funds for retirement. Farmers can only take advantage of this external force of change by differentiating their products from the global market. “Identity preservation” is one response: products retain their identity as to farm of origin, ultimately depending on that source's assurance as a guarantee of quality to the consumer (Hall, Forum II; Lankford, Forum III). Another is to “add value” to locally grown commodities by processing them into products worth more to the consumer: local wheat becomes artisanal bread, local poultry becomes prepared chicken fajitas (Hall, Forum II). By shortening the product distribution chain and transforming it into a “value chain” (Kirschenmann, Forum V), both responses can also return a greater proportion of the consumer dollar to the local farmer.

Consumer Food Preferences

In partial response to the consequences of globalization on food quality and security (for example, the recent problem with fresh spinach contaminated with toxic *E. coli* bacteria), there is a growing preference among consumers for foods that are considered to be more fresh, safe, and healthy. Organic foods are a good example, comprising the fastest growing (10% per year) sector of the food market today. Consumers are willing to pay a premium price for certified organic produce but it is unclear that the higher prices are socially equitable and they may not even be sustainable in the face of growing competition among producers. The great advantage of changing consumer preferences is that many of the preferred foods are grown and/or prepared locally.¹⁵ The popularity of farmers' markets and community-supported agriculture (CSA) operations are tangible results (Yonkers, Forum III). The average vegetable purchased in the super market has traveled 1,000 - 2,000 miles to its destination; a similar product purchased at a farmers' market (there are nearly 4,000 nationwide, 75 in Maryland, and two in Talbot County¹⁶) has traveled less than 100 miles from its field of origin. Reduced distribution costs and low overhead return more of the consumer dollar to the farmer. A trend toward selling artisanal, value-added products at farmers' markets and CSA's, coupled with increased marketing over the Internet¹⁷, can extend their season to year-round and provide niche products unavailable in chain

¹⁴Gardner, B. 2004. Trends in Maryland agriculture. McLain lecture, Washington College, November 7.

¹⁵Cloud, J. 2007. My search for the perfect apple. *Time*, **169**(11):42-50.

¹⁶Maryland Department of Agriculture. 2006.

http://www.mda.state.md.us/md_products/farmers_market_dir.php

¹⁷Hirsch, J.M. 2006. Group bringing farmers market into the digital age. *Easton Star-Democrat*, July 26.

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stores. Even so, with only about 35,000 persons, Talbot County's population is far too small to serve as a primary source of support for its entrepreneurial farmers. If this sector of the agricultural economy is to be sustained by taking advantage of changing consumer preferences, we must exploit the more distant but far larger markets across the Chesapeake Bay and beyond. And we must do so by distinguishing our products from those of potential competitors as well as others that are currently available via global distribution networks (Hall, Forum III; Lankford, Forum IV).

Workforce

Workforce issues integrate many other forces of change¹⁸. Globalization is closely interrelated with the increased mechanization of farming. Over the past 100 years, the agricultural sector has shrunk from employing 80% of the U.S. workforce to less than 2% today¹⁹. Talbot County's grain agriculture, for example, is machine- rather than labor-intensive, allowing young people to leave the farm for other occupations whether by preference or economic need. Now, increased land prices and inheritance taxes make it difficult for them to return, or for any young person to begin a career in farming. Further, population growth is creating a new unskilled labor force comprised largely of immigrants. It is possible to take advantage of these changes by facilitating the entry of young farmers into small-scale, entrepreneurial operations that utilize the local and more distant niche markets created by changing consumer preferences. Appropriate to the size of operation, labor may be provided by the entrepreneurs and their families and augmented from the growing unskilled labor force. Community support will be critical to take advantage of this force of change through acceptance of immigrant labor, educating and training the new labor force, expanding social services, and providing the necessary affordable housing. These actions are not limited to the agriculture sector, but through that sector they have the potential to repay the community for its investment by sustaining its working landscape.

Environmental Awareness

There is no doubt that the Chesapeake Bay has catalyzed a high level of environmental awareness across its 64,000 mi² watershed, and the people of Talbot County are no exception. The multiplier for both positive and negative environmental impacts is substantial: agriculture currently accounts for 14,700 mi² (23%) of Bay watershed land use. Ever since the introduction of contour plowing by Thomas Jefferson, regional farmers have adopted an increasing number of innovative and largely voluntary best management practices (BMP's) to reduce the impact of their operations on water quality. Unfortunately, a mandatory nutrient management law enacted following the *Pfiesteria* crisis of 1997²⁰ put agricultural and environmental interests at loggerheads as if they were not part of the same working landscape. In spite of problems with water quality that are not solely related to farming, Talbot County citizens acknowledge that agriculture contributes to the quality of the region's environment (*Table 3*). Farms create

¹⁸Carrasco, V. 2006. Workforce challenges: sustaining agriculture in Talbot County. Presentation to Steering Committee, February 21, 2006.

¹⁹Richardson, J. *Ibid.*

²⁰Maryland Nutrient Management Act of 1998.

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habitat, whether as a result of the crops themselves or the turn rows, ditch borders, hedgerows, and wood lots that characterize agriculture on the Eastern Shore. Just as Native Americans once used fire to modify their working landscape to promote an abundance of game, so our farmers have created a working landscape that is largely responsible for Delmarva's biodiversity today. Cost-sharing programs already at hand can create wildlife habitat, reduce sediment runoff, and sequester excess nutrients (Kampmeyer and Zinter, Forum IV). If these programs can be enhanced to provide competitive economic benefits, more Talbot County farmers can be expected to participate, turning environmental awareness into an advantage instead of a challenge to profitability.

Table 5. Force of change analysis of Talbot County agriculture.

Force	Consequences	Pro-active Responses
Population Growth	Sprawl; conversion of productive farmland to development; downzoning without adequate compensation for reduced development rights	Increase market potential for "buying local," including niche markets for new immigrants
Globalization	Decreased profitability of farming for grains and other commodities, encouraging farmers to sell land for development or for consolidation into larger operations	Differentiate crops from global commodities on basis of quality, freshness, safety and/or identity with local farms; add value to commodity products
Consumer Food Preferences	Increased demand for organic products and others perceived to be more fresh, healthy	Support farmers' markets and CSA's for local fresh and organic products; develop brand identity to open larger, more distant markets for locally-raised produce
Workforce Issues	Fewer farmers for next and future generations; more difficult entry of young people into farming; itinerant, untrained labor	Facilitate entry of new or first-time farmers; provide training, community services, affordable housing for immigrant workers needed for labor-intensive crops
Environmental Awareness	Decreased profitability due to voluntary adoption of expensive BMP's; imposition of mandatory regulations that decrease net profitability without adequate compensation	Subsidize or otherwise compensate farmers who adopt BMP's; enhance existing cost-sharing programs and develop new ones that contribute to environmental quality
Tourism	Inability to take advantage of new dollars brought to region by tourists; lack of community identity with agriculture as a primary economic engine	Adopt agriculture as part of community economic development; promote agriculture as tourism destination; publically identify community with its agricultural enterprises
Energy	Increased costs to farmer for fertilizer, fuel, and product distribution reduce net profits	Develop new markets for ethanol, biodiesel, and next generation biofuels using locally grown sources; reduce costs to farmers for locally produced biofuels

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Tourism

We were surprised to learn Talbot County is promoted as a culinary destination but that agrotourism is virtually non-existent (Dodson, Forum IV). Amenity services and tourist destinations are in increasing demand by Americans who are spending larger proportions of their free time out of doors. Active people with children and grandchildren in tow are touring destinations via foot, bicycle, horseback, or kayak. Birding, wildlife observation, and other passive involvement with the working landscape are among the nation's fastest-growing leisure activities. In many regions of the U.S. ranches and farms are popular tourist attractions where visitors may even – to the surprise and delight of the farmers themselves – take part in daily chores from milking cows to bailing hay. This is a force of change that is largely unexploited by Talbot County even though local citizens rank the working landscape over food as the agriculture's major contribution to the county's quality of life (*Table 2*).

Energy

Energy has only recently emerged as a significant force of change because modern agriculture's production and distribution systems have developed in the context of cheap, readily available energy supplied largely by fossil fuels (Kirschenmann, Forum V). Cheap energy has long been associated with the production and distribution of fertilizer, fuel for farm machinery, and distribution of product to market. Recent and anticipated future increases in fuel prices pose significant challenges to that system and, more immediately, can exceed the ability of farmers to accommodate the higher costs while maintaining a profitable bottom line. If such costs cannot be passed on to the consumer, farms are expected to suffer as food prices become less competitive with products in the global marketplace. However, the feasibility of using grains and grasses for ethanol and biodiesel production creates exciting opportunities for local energy production. The results of this proactive response to energy as a force of change can be new markets for farmers who grow such crops, whether as alternative sources of animal feed or to create wildlife habitat, and perhaps even result in reduced costs for locally produced biofuels.

Bioregional Perspective

The philosophy that became bioregionalism had its modern origins in radical, anti-big government intellectual movements in the 1960's²¹. Its roots go much deeper, however, well into the agrarian movement that continues to link bioregionalism with agriculture. It has enjoyed eloquent spokesmen along the way, most notably Henry David Thoreau in the past and Wendell Berry today. Despite its radical origins and the writings of its most vehement proponents, bioregionalism includes elements that have withstood the test of time and, we believe, constitute a valuable perspective for visioning to sustain agriculture.

²¹McGinnis, M.V. [editor]. 1999. Bioregionalism. Routledge. This collection of essays explores bioregionalism from its origins to present-day.

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A bioregional perspective views a working landscape as a functional system confined only by natural boundaries such as mountain ranges and large bodies of water. Jurisdictional boundaries established for political reasons have lesser relevance. A watershed is a bioregion; a county likely is not. In the Chesapeake Bay region, we have observed environmental policy changes that reflect this perspective such as the formation of multi-jurisdictional Tributary Teams based on actual watersheds rather than state and county lines. This perspective places Talbot County within a hierarchy of bioregions: Choptank watershed, Delmarva Peninsula, Chesapeake Bay, mid-Atlantic. A closer look reveals additional insights. For example, it is unlikely that we can consider the future of Talbot County agriculture without considering – and taking better advantage of – forces of change that are operating on farmland across Delmarva, or on farming within the Chesapeake Bay watershed. The perspective is not limited to geographic and environmental parameters. Consider, for example, that farms in the Delmarva bioregion are within an overnight drive of over half of the U.S. food consumers, reaching as far North as Boston, as far West as Chicago, and far South as Atlanta (Hall, Forum II). The success of the Delmarva poultry industry demonstrates the economic advantages provided by a regional enterprise that successfully markets to more distant consumers. While not deliberately “bioregional” per se, poultry can be viewed as a model that successfully incorporates many bioregional principles. We believe that this model can be diversified to other agricultural products. Markets for such products within the bioregion could constitute a foodshed in which consumers and producers recognize their mutual interdependence based on mutual well-being²². Could consumers within this foodshed become so informed as to support through their purchases Talbot County, MD, or the Delmarva Peninsula as a source of fresh, safe, and high-quality food?

The anti-big government origins of modern bioregionalism have persisted in a focus on local communities. A bioregional perspective is a grassroots perspective in which citizen participation and community take precedence over governmental laws and regulations to get things done. According to such a perspective, the current disconnect between farmer and consumer that exists nationwide is incompatible with attempts to sustain agriculture (Price, Mawby, and Manigold, Forum I). The most promising of these attempts involve “bottom up” community support more than “top down” governmental regulation.²³

The grassroots emphasis of a bioregional perspective places a premium on what we have come to call “sense of place.”

“A strong sense of place begets a strong sense of community. In an ideal situation the community pulls together, cooperates, takes care of its people, develops its village pride, its cuisine and accents, tolerates and supports its local eccentrics and characters,

²²Kloppenborg, J., J. Hendrickson, and G.W. Stevenson. 1996. Coming in to the Foodshed. *Agriculture and Human Values*, 13(3):33-42.

²³See, for example, Holmes, M.K. 2005. Entrepreneurial Farming, Part of the Plan for Prosperity in Northeast Ohio. Special Report, The Farmland Center, Peninsula, OH. This is representative of a many grassroots approaches to sustaining agriculture. Many others, including both large- and small-scale enterprises, are documented by the American Farmland Trust at <http://www.farmland.org>.

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and has in some cases an indigenous music, or a literary style –
and above all, a sense of itself.”²⁴

Sense of place is where conceptual disconnects between food producers and food consumers, citizens and farmers, businesses and farms, and environment and agriculture have the most serious consequences for a rural community. In attempting to sustain our agricultural enterprise, we must realize that we are attempting to define and sustain ourselves.

²⁴Mitchell, J.H. 1995. *Walking Towards Walden: a Pilgrimage in Search of Place*. Addison-Wesley.

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Our Vision for Sustaining Agriculture

*Delmarva, a place where land and water meet; a region carpeted
by farms and forests, buttoned by villages and towns.*

– Congressman Wayne Gilchrest

This is our vision plan for sustaining agriculture as a productive, profitable, and environmentally responsible component of Talbot County’s working landscape. We directly address the two principal issues affecting Maryland agriculture: decreasing profitability and increasing uncertainty. Our immediate time frame is the next two decades but we sincerely hope that elements will persist as an asset for the next and future generations of those will come to call this place home.

A Diversified Agriculture

Agriculture in Talbot County currently operates on two principal scales. Large-scale grain agriculture accounts for nearly 50% of total land use and consists of “home base” farms plus rented lands that together comprise operations of thousands of acres. This is the agriculture of the vistas and open spaces that citizens value so highly. It is also the agriculture of commodities that have been marginally profitable in the face of global forces of change. Small-scale “home” farms of less than 200 acres constitute at most 10% of total county land use. This expanding sector produces specialty crops for fresh markets on intensively managed lands or in greenhouses, both requiring considerable labor input. Economics are such that it is very difficult for new farmers to purchase or even to rent sufficient land for start-up grain operations unless they are part of a grain-farming family. It is far more likely that young farmers will begin as entrepreneurs on a much smaller scale. Our vision is that a sustained agriculture will be a diverse agriculture at both scales, and that the people of Talbot County will proudly identify with its total agricultural enterprise.

Opportunities for Large-Scale Grain Agriculture

Virtually all grain (corn, wheat, soybeans) grown in Talbot County is sold locally on Delmarva as feed for the poultry industry. The interdependence between large-scale agriculture and poultry mirrors that between grain agriculture and the beef and pork industries in other parts of the USA and reflects the results of the economics of scale as well as deliberate USDA policy²⁵. The problem for the Eastern Shore is that the region is still a net importer of grain. While our large-scale agriculture is highly dependent on the poultry industry for its survival, the reverse is far less true as poultry must remain globally competitive. Alternative markets for grains need not be at the expense of poultry, but can create more profitable operations that will better insure that grain farming will remain viable into the future for the benefit of all interests.

²⁵Pollin, M. 2006. *The Omnivore’s Dilemma*. Penguin Press, New York.

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Of the primary components of a grain crop rotation, corn poses the most significant environmental challenges: it demands relatively large amounts of nitrogen fertilizer, it is not highly efficient in taking up fertilizer nutrients, and its cultivation can expose large areas of bare ground to rainfall and runoff. Maryland farmers, including those in Talbot County, have demonstrated regional and national leadership in responding to these challenges through many best management practices (BMP's), including no-till agriculture, participation in cover crop programs, and adoption of nutrient management plans even before such were required by law. Our farmers are also in the forefront of increased use of manure as instead of more expensive and energetically expensive commercial fertilizers and chemicals. Even so, it is realistic to anticipate attempts to impose more stringent BMP's on grain, especially corn, agriculture, as the state-federal Chesapeake Bay Program strives to meet ambitious water quality goals that it has failed to achieve over more than two decades of voluntary and mandatory management. We can only demand that such attempts equitably compensate farmers for any reduced production. It is unrealistic to envision the conversion of grain agriculture on such a scale to, *e.g.*, large-scale truck farming that characterized Delmarva 100 years ago. Rather, we are concerned that a significant decline in growing grain is more likely to be replaced by an increase in growing houses as farmers cash in on their accrued equity in the face of increased operating costs and diminishing profits.

But alternative markets for large-scale agriculture do not necessarily mean replacing grains with other commodities. Perhaps the most promising prospects exist via creative responses to energy as a seriously threatening force of change. Initiatives are already underway within the agricultural community as well as Talbot County Government to develop *regional* resources for the production of biofuels (Hutchinson, Forum II; Clarke, Forums II and IV). Short-term solutions for producing ethanol from corn are already being advocated. However, corn itself is such an energy-intensive crop whose large-scale cultivation is inherently challenging to Chesapeake Bay water quality that this is less a sustainable prospect than an interim method for improving technology (Russo, Forum II). We learned that federal policy is promoting the production of ethanol from biomass, including such sources as corn waste and switchgrass (Russo, Forum II; Staver, Forum IV). Hull-less barley appears to be particularly promising as a biofuel source that would not be directly competitive with other grains that are primarily used by the poultry industry (Hutchison, Forum II). If grain farmers were to grow a portion of their fields in grasses for ethanol production from biomass, a strong local market for such, coupled with lower fuel prices for on-farm use, could increase the net profitability of large-scale operations and even create a degree of energy-self sufficiency for Talbot County and neighboring jurisdictions in the bioregion.

Other options for diversifying large-scale agriculture are also underway. Chesapeake Fields Institute is attempting to add value to locally grown grains through the production of artisanal breads, healthy snacks, and specialty soybeans, the latter for niche markets in Japan (Hall, Forum II). The net effect of regional cooperation for production and distribution is to return a greater proportion of the consumer dollar to the farms of origin. Chesapeake Fields is also promoting identity preservation; customers will soon be able to trace their purchases back to the local farm of origin as a means of ensuring product quality through accountability. This is a good example of a value chain (Kirschenmann, Forum V).

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We do not see diversification of crops and markets as replacing grain agriculture in Talbot County. Our vision is to strengthen large-scale operations as profitable businesses, reduce their environmental impacts through increased crop diversity, and so ensure that this aspect of our working landscape can be sustained as an asset for future generations.

Opportunities for Small-scale Entrepreneurial Agriculture

Consumer preferences for foods that are deemed to be fresh, healthy, and safe are likely to create more opportunities for entry into small-scale entrepreneurial enterprises. These operations may take place on small, intensely managed fields or in greenhouses perhaps only a few acres in size. In addition to farmers' markets and CSA's, these operations will take advantage of niche markets: organic outlets, restaurants, and ethnic foods. Many of these are inherently identity-preserved because their sources are known by the clients, and the short distribution value chains (more often than not involving the farmers themselves) mean return of a greater proportion of the consumer dollar back to the farm. In addition, they foster a closer connection between consumer and farmer that we believe is an important element in supporting any community-based vision for sustaining agriculture.

We cannot stress enough that "buying local" is a necessary but economically insufficient means of sustaining agriculture in Talbot County and the Eastern Shore in general. Rural Delmarva simply does not have an adequate large, permanent consumer base²⁶. For entrepreneurial agriculture to prosper here, farmers must take advantage of the tremendous markets available within the Washington-Baltimore-Philadelphia-New York corridor and possibly even beyond²⁷. We need to adopt a bioregional perspective that sees us farming at the urban fringe rather than on our own isolated peninsula and develop an understanding that farmer and consumer alike are part of the same foodshed²⁸. Citizen perceptions that Talbot County crops are sold mainly in season at roadside stands (*Table 5*) may or may not be accurate, but they certainly are unacceptable if agriculture is to be sustained as a significant contributor to the economy.

Connecting Agriculture and Community

Talbot County is only marginally identified with agriculture by interests beyond its borders. The County's farms and working landscapes are not promoted as a tourist destination, nor did we find farm profitability as a significant target for economic development. The current situation is incompatible with a bioregional-based vision for sustaining agriculture. Our citizens (*Table 3*) rank agriculture's contribution not in terms of food, but in terms of community and quality of life. We need to reaffirm and strengthen those connections.

Differentiating Our Products

²⁶The population of Delmarva is 1,230,901. If we subtract the 500,265 people living in New Castle County, DE, the population of rural Delmarva is less than 750,000 (U.S. Census 2000 data).

²⁷Hall (Forum II) estimates these four markets contain 60 million consumers, 1/3 of all U.S. consumers.

²⁸Kloppenborg, Hendrickson, and Stevenson, *Ibid*.

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The current situation that stacks supermarket shelves with products from the global marketplace stands in stark contrast with conditions a century ago when nearly every community had its local cannery with a distinguishing identity – “Defender” brand tomatoes, “Bob White” brand pumpkins, “Old Wye” brand juices. Today, the Chesapeake Fields Institute has adopted the Bay as its marketing label (Hall, Forum II). Talbot County farmers should consider identifying their bioregion through brand recognition to differentiate Eastern Shore products from those that have traveled hundreds if not thousands of miles to the local market. In addition to a recognized label, differentiation could emphasize the value chain by, for example, adding a “mileage sticker” to local products and certifying that the farm of origin is minimizing environmental impact by conserving energy and participating in Chesapeake Bay water quality programs.

Such action is not trivial. We were told that the quality of a fresh “Eastern Shore” tomato already means something very good to restaurateurs and tourists alike (Yonkers, Forum III). Why not capitalize on this in selling regional produce at markets across Chesapeake Bay? Tuscarora Organic Growers Cooperative, which already sells to portions of these markets, has put its recognizable logo on its fleet of trucks (Fullerton, Forum III). Envision, if you will, trucks signed with “Growing Our Future, Maryland’s Eastern Shore” crossing the bridge to deliver fresh foods to markets in DC and Baltimore. Expand that vision to have those trucks operate as part of a farmers collaborative that identifies market outlets, puts suppliers and clients in contact with one another, and operates the distribution system from a central location convenient to local farmers. If you were a stranger to Talbot County, would that not tell you something about our community? If you were an Eastern Shore resident, would you not feel a little pride? Despite the presence of existing competition, we were informed that DC and Baltimore markets are far from saturated (Hall, Forum II, Fullerton, Forum III; Lankford, Forum III). Even if they were, Eastern Shore produce already enjoys a reputation that should make it competitive.

Agriculture as Industry

Our vision first sees farming as a business. This perspective suggests several possible ways in which Talbot County and its other businesses could work to support the farming industry. Among these are low-interest loans for beginning farmers, a County-wide health plan for farmers and their families, and facilitation (as industrial projects are facilitated) with planning, zoning, and permitting of new enterprises. A further step would be to develop a new zoning classification that would consolidate several enterprises into an agriculture industrial floating zone. A floating zone approach might be especially effective in protecting specific entrepreneurial operations from high prices for land that would otherwise be subject to residential development. For example, an agricultural industrial floating zone could be established as a hub for demonstration projects as well as specific working operations for the purpose of public outreach, education, and training. The purpose and permissible activities within an agricultural industrial floating zone would need to be carefully defined; we encourage involvement of representatives from the wider Talbot County business community in this process.

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Agro-tourism

We heard of a widespread perception that opening a farm to tourists places the landowner under serious liability. This perception is not fully consistent with existing Maryland law²⁹, but to the extent that the problem does exist Talbot County needs to address it as an impediment to agro-tourism. Communities in other states, such as Lancaster County, PA, are reaping the benefits of a vibrant tourism based in part on their agricultural operations.

But tourism need not be wholesale. Our vision includes one or more farm days organized on a County- or region-wide basis, replete with special markets featuring local produce and farm-based products and crafts, and maps directing visitors to well-organized local farm tours. Our vision also includes identifying Talbot County's working landscape as a tourist destination for biking, kayaking, birdwatching, and other passive activities for enjoying the outdoors. The purpose is to identify our working landscape as a basis for quality of life. We have been told (Dodson, Forum III) that one of the most popular tourist vistas is at Cooke's Hope with its Belted Galloway cattle. Attractive as the view may be, this is hardly a typical working farm; it is more consistent with the bucolic myth of agriculture than it is representative of the business of farming. Our working lands are equally beautiful. Our citizens have told us so, and we should convey that message to others who are willing to pay for the pleasure of visiting our home.

Education

Agricultural education is a three-fold task: (1) prepare individuals for careers in farming, especially the next generation of young farmers; (2) provide current farmers with training in new methods and practices; (3) inform the general public. Talbot County is blessed with an active Cooperative Extension office that conducts education activities that target both farmers and non-farmers. These programs include the public schools; in fact, a program collaboration with the Talbot County Farm Bureau reaches every 4th grader each year. It is easy to document the breadth and depth of farm education in the county, and to see the smiling results displayed periodically in our newspaper³⁰. Why, then, do so many citizens rank education for school children and the general public as a need for county support (*Table 4*)?

Problems facing agricultural education are similar to those confronting outdoor education in general. Young people especially have diminishing opportunity to experience the environment,

²⁹Maryland Recreational Use Statute, COMAR Natural Resources, Title 5, states, "The purpose of this subtitle is to encourage any owner la land to make land, water, and airspace above the land and water areas available to the public for any recreational and educational purpose by limiting the owner's liability toward any person who enters on land, water, and airspace above the land and water areas for these purposes." The statute goes on to say that a landowner who invites or permits without charge persons to use the land for recreational or educational purposes does not incur liability as a result of any injury to the person and is not obligated to give any warning of hazards or other dangerous conditions. While absence of liability is not extended if there is a charge for land use, such is not the case if the land is "leased to the State or any of its political subdivisions," in which a "lease" is not considered to be a "charge."

http://utopia.utexas.edu/explore/equine/recreate/me_rec.htm.

³⁰Easton *Star-Democrat*. Farming and Agriculture 2006. April 19.

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whether it be a park, nature preserve, or working landscape. Louve³¹ calls this problem “nature-deficit disorder” and relates several social consequences that may follow. A trip to a farm, even if possible within today’s performance-based school curriculum, is similar to a trip to the zoo – a special event with a positive impression that does not last once the young person returns to school and goes home. Agriculture is no longer a way of life for the majority of our nation’s children. Even their parents are at least a generation distant from farming. When it comes to agricultural education, we are suffering from the consequences of a “farm-deficit disorder.”

Our vision would be naive if we were to assume that Talbot County agriculture would be sustained merely as a result of a more extensive education program for young people and adults. We do strongly believe, however, that providing opportunities to experience the working landscape first-hand would strengthen the connection between farming and community that is a vital part of that vision. These experiences can take many forms. Chief of Staff to the Steering Committee has experienced some success connecting regional bird biodiversity to the working landscape through middle and high school student-conducted field research and monitoring.³² A demonstration farm that shows the public various aspects of large- and small-scale agriculture and provides a setting for experimenting with new techniques is another possibility. Involvement of more young people in agricultural experiences through paid internships is yet another. We must not overlook the fact that authentic tourism experiences have considerable educational value as well especially if more “buying local” Eastern Shore products is a long-term result .

Education must not be limited to an external audience. Planning and zoning officials in particular should be better informed about our collective goal to sustain agriculture as a preferred land use rather than as a source of land for other uses in “development.”

Any education initiatives should not be undertaken at the expense of programs intended to prepare and serve the future’s farmers. We are heartened to learn that Chesapeake College is adopting a state agriculture curriculum for delivery on the Eastern Shore. There is an urgent need to provide new training that will have farmers take better advantage of forces of change such as globalization, changing consumer preferences, and climate change. We must never neglect the next generation of those who will inherit and take charge of our working landscape.

Connecting Agriculture and Environment

It is undeniable that the productivity of modern agriculture is a major contributor to the quality of life on the Eastern Shore, the State of Maryland, across the USA, and around the world. We acknowledge and applaud the leadership of our local farmers that has made the Chesapeake Bay region a leader in agricultural stewardship and conservation³³ Despite the challenges of profitability and uncertainty, 99% of Talbot County farmers have filed nutrient management

³¹Louve, R. 2005. Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder.

³²Bell, W.H. 2006. Landscapes, Birds, and People: a Biodiversity Primer. CD-ROM resource for teachers and outdoor educators available from author (*Appendix 1*).

³³Maryland Agricultural Commission. *Ibid*.

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plans affecting a total of 73,053 eligible acres.³⁴ Our vision for sustaining agriculture, as well as the high expectations of Talbot County citizens, sees farmers and environmentalists working together to improve water quality, enhance farm profitability, and preserve agriculture as an irreplaceable cultural resource.

A primary focus on nutrients, however, can distract attention from other areas where farming can make a positive contribution to environmental quality. We do not pretend that nutrient pollution from agricultural lands is not an issue throughout the Chesapeake Bay region, just as it is a problem associated with all other uses of the working landscape. We endorse all equitable efforts to reduce that pollution as necessary for the sustainability of agriculture in Talbot County. We also recognize that the availability of the cheap, abundant fossil fuel energy that supports the current agriculture system can no longer be assured in the future, nor can we expect hefty government subsidies that encourage farmers to grow more and more grain to continue³⁵. In short, while the nature of grain agriculture in the future will be dictated by its ability to respond (as opposed to react) to forces for change, we believe that large-scale operations will remain the predominant land use. Our vision attempts to respond to environmental forces of change by diversifying grain agriculture to provide economic alternatives to maintain or even enhance profitability while at the same time taking advantage of the scale of this land use to reduce its environmental impact.

At our public forum on Environmental Opportunities, we learned that grassland bird species, such as the Northern Bobwhite, Eastern Meadowlark, and Grasshopper Sparrow have exhibited population decreases greater than 5% per year since the 1960's³⁶. These declines reflect in part changes in agricultural practices: shift from pasture to feedlot, increase in grain monoculture, and rotations of corn, soybeans, and wheat that can result in fields being harvested and tilled during the breeding season³⁷. The result is not to kill birds outright, but rather to force them into smaller, more restricted breeding habitats, often at the edges of productive croplands where they are more susceptible to nest parasitism by Brown-headed Cowbirds and predation by foxes, raccoons, and even deer. Research conducted for the past six years at Chino Farms in northern Queen Anne's County (Gill, Forum IV) indicates that grassland birds such as Grasshopper Sparrow will respond within the very first year following the creation of suitable breeding habitat: "Build them habitat, and they will come." The recently-completed Maryland-DC Breeding Bird Atlas Project³⁸ has produced some promising results regarding the persistence of populations of Northern Bobwhite and others in grass buffers established under the Conservation Reserve Enhancement Program (CREP).

³⁴Data reported by Maryland Nutrient Management Program as of March 31, 2007; personal communication.

³⁵Pollan, M. 2006. *Ibid.*

³⁶North American Breeding Bird Survey, Patuxent Wildlife Research Center, Laurel, MD.

<http://www.pwrc.usgs.gov/bbs>.

³⁷Droege, S. 1996. Maryland, efficiency, and Birds. Audubon Naturalist News, May.

³⁸Maryland Ornithological Society. Maryland-DC Breeding Bird Atlas Project, 2002-2006.

<http://www.mdbirds.org/atlas.html>.

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While we endorse the voluntary enrollment of individual farms in cost-share programs such as CREP and the Conservation Security Program, we firmly believe that large-scale, regulatory adoption of such programs is completely inconsistent with our vision for sustaining agriculture. Even small acreage set-asides per farm would rapidly multiply to remove thousands of acres of land from production. This would be a direct threat to the majority of grain farmers who must rent acreage from other landowners in order to ensure profitability of their respective enterprises; the result would be almost certainly the large-scale loss of working farms rather than their long-term preservation. In our view, any policy, no matter how well-intentioned, that results in the large scale removal of farmland from production will prove to be, in a word, counter-productive. Our Vision Plan necessarily seeks profitable alternatives through environmental opportunities.

We believe that attractive alternatives are near at hand that will provide profitable market incentives for farmers who wish to diversity their operations. Most promising is to use grassland crops, including switchgrass and other warm-season grasses, as a source for energy production. The resulting biomass can be harvested in the fall and burned directly as for heat or converted to bio-ethanol, perhaps under the Talbot County waste-to-energy initiative (Clarke, Forums II and IV). Staver (Forum IV) reported that standard hay mowing and baling machinery can be used for harvest. The “crop” can then be used on the farm or sold locally, an additional incentive to the farmer who is in fact creating grassland habitat that will reduce the expenses and contribute to the net profitability of her/his entire enterprise. The additional buffering capacity furnished by these grasslands will have the added benefit of reduced fertilizer use and reduced nutrient and sediment runoff, thereby contributing to improved water quality.

While the same approach would work, in principle, for small-scale agriculture, the necessary reduction in scale itself may not provide a sufficiently large grassland habitat “island” for breeding bird success. However, entrepreneurs interested in transitioning into organic farming might be able to take advantage of temporary cost-share assistance by growing whole fields of grassland habitat without fertilization for the 3 years required to achieve certification. While assistance would terminate when the grasslands are harvested and organic crops planted, cost-share would be available to help during the transition period when farming the land could be far less profitable.

A vision that connects agriculture and environment, like other creative responses to forces of change, requires new ways of thinking about traditional programs and goals, and new perspectives on ways to reduce costs and maintain profits. The result, however, could be working landscape in which farming, habitat, enjoyment of the outdoors, and community sense of place are much more closely coupled. The citizens of Talbot County could be justifiably proud of their support of an agriculture that is as beautiful as it is profitable, and that is recognized for its contribution to environmental quality as well as for the quality of its products. It is a vision for all of us to enjoy together.

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On the Horizon

Where there is no vision, the people perish: but he that keepeth the law, happy is he.

Proverbs, 29:18

We believe that elements of our collective vision, coupled with the premises upon which it is based, provide some degree of confidence that we can deal with new forces of change from the bottom up, turning to less flexible top down laws and regulations as a last resort. Is this confidence justified? We consider here three “big picture” forces of change that loom on the horizon. Most of them are already beginning to affect our bioregion even though we do not necessarily recognize them as forces, let alone consider how to make commitments that might use them to our advantage for sustaining agriculture.

Energy Conservation. Recent high fuel costs are the result of a variety of market forces that are not necessarily related to actual energy shortages. However, our current agricultural system, with its requirements of high levels of nitrogen fertilization and farm machinery, has been developed and remains highly dependent on cheap, readily available energy. So is the national and global food distribution network that makes products shipped in bulk over long distances more than economically competitive than those grown locally. But while promising new energy sources are emerging, from biomass to solar to wind power, none of them has the energy return for unit of energy invested that oil provides – in short, more available energy will have to be used to produce the same amount of useable energy from these sources (Kirschenmann, Forum V). It is not that we will run out of energy, but there will be increasing demands on its use, including increasing energy demands to produce it. The result of this competition will be substantial increases in energy costs. The only practical solution is energy conservation, and that is expected to become a force that will result in a paradigm shift in agriculture here and abroad. Diversification of agriculture in Talbot County can provide a basis for exploring and profiting from alternative, less energy-intensive methods. Among examples currently available are free-range livestock, rotational grazing, and use of solar and other passive energy sources for greenhouse operations. None of these are expected to replace large-scale grain agriculture’s contribution to Talbot County’s economy and sense of place. But we do promote diversification of agriculture, while attempting to curb our personal energy use, as an investment in the future of our working landscape.

Global Climate Change. Whether you call it global warming or just climate change, the fact that it is occurring is no longer in dispute. Whether or not one believes that human activity is the cause, we are already experiencing a string of warmer than normal global temperatures that is likely to continue into the indefinite future. This warming is accompanied by more severe storms and large-scale changes in the distribution of the earth’s precipitation. It is likely to affect local agriculture wherever it is practiced. Diversification of our working landscape may be our only currently available assurance that Talbot County agriculture will be able to adapt. Rather than tie our farming to dependence on a limited number of products, we should be open to the introduction of new crops that are more appropriate to our climate no matter how

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threatening they may be to existing markets. The future of Talbot County agriculture may well be dependent on our collective ability to embrace and implement new ideas.

Water. The Eastern Shore is blessed with an abundance of water, much of which occurs in rechargeable surficial aquifers. But the same is not true for other parts of the U.S. nor for many other countries. The world is already using twice the amount of water for irrigation as it did in 1960, a trend that is not sustainable without expending more and more energy for water extraction and transport. As shortages increase, there will also be increasing demand on those who have a surfeit of fresh water to supply those who do not. It is obvious that climate change and energy shortages will exacerbate the situation. We should not be complacent about our water supply; it makes good economic as well as environmental sense to become more efficient in our use of this precious local resource. Local adoption of agricultural practices that are less energy-intensive, such as controlled drip irrigation on crop lands and water recycling in greenhouse operations, would be less water-intensive as well. Certainly, we must not take water supply as a given when attempting to take advantage of other forces of change.

There are aspects of what is on the horizon that go beyond present-day agriculture as we know it in Talbot County. We believe this community should find ways to reward those farmers who take the risks necessary to prepare for these future forces of change as well as absorb any additional operational costs for practices such as reduced fertilizer and pesticide use, expanded stream/ditch buffer strips, and/or wildlife habitat creation, that make substantial contributions to improving the future environment of the Chesapeake Bay watershed. Such farmers ought to be recognized through policies that reduce their tax burden, provide additional cost-sharing assistance, attract extramural grants to support their initiatives, and generate public recognition for the good work that they do.

We are at an important decision point relative to the future of agriculture. This Vision Plan is based on the premise, as related to us by elected officials, planners, and the citizens themselves, that agriculture is important to the people of Talbot County. In accepting that premise, we affirm that farming is worth sustaining, collectively deciding to help farmers stay in business in return for their contribution to our quality of life. Achieving the vision of a sustained working landscape is a task for each of us, whether we harvest its bounties or enjoy the pleasures of its vistas. Let us begin and, above all, let us work together to achieve the vision.

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Achieving the Vision

The fundamental question in land conservation is this: How can we achieve public goals on private lands? The fundamental conflict is over another question: Who pays?

Ralph Grossi, President, American Farmland Trust

A vision can be expansive, even poetic. Grossi's comments, however, reflect reality. Sustaining agriculture in Talbot County will not be without cost. We must do our best to keep those costs reasonable and we must bear them equitably. Some of our recommendations involve risks associated with innovation that few farmers can afford. We hope that this Vision Plan provides a context within which Talbot County citizens and their elected officials can support farmers who are willing to undertake such risks. We begin by defining the goal more precisely by summarizing the principal elements of the vision plan. We then put forward some recommendations for getting started toward "Growing Our Future."

Elements of the Vision Plan

Our vision for sustaining agriculture in Talbot County is set forth as a preamble to this document and the opportunities we see are explored in detail in the preceding section. The principal elements that underlie this vision are summarized below.

1. *A diverse working landscape that is an asset for our next generation of farmers and for the Chesapeake Bay.* Our vision is that Talbot County agriculture will consist of a diversity of large-scale commodity and small-scale entrepreneurial operations. While we believe that grain agriculture will continue to dominate the working landscape over at least the next 20 years, we also believe that economic opportunities will present themselves to give farmers additional choices beyond the current rotation of corn, soybeans, and wheat. We believe that a more diverse, profitable grain agriculture will be a boon to poultry interests as well, and that the poultry industry has much to gain by actively working with farmers across Delmarva to sustain their respective enterprises. We also see several forces of change working to increase the number of entrepreneurial operations in the years ahead. This will undoubtedly be at the expense of some grain farmers who will cease operation but is our vision that the bulk of such lands will remain in farming, even at a smaller scale, rather than convert to residential development. In all cases, our vision is for a working landscape in which active use of the land makes a positive contribution to Talbot County's economy, culture, and quality of life.
2. *Bioregional identity.* We believe Talbot County should be justifiably proud of its agricultural enterprise. To that end, we envision a bioregional identity that is recognized for quality not only locally, but throughout the Eastern Shore and, especially, in the large and potentially profitable food and restaurant markets

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across Chesapeake Bay. Our vision includes preservation of that identity through appropriate Eastern Shore branding and marketing, even to include the farm or origin as a recognized assurance of quality. A regional identity need not be limited to produce grown on entrepreneurial operations. As the Chesapeake Fields Institute has shown, value-added grain-based products can also return more of the consumer dollar to large-scale operations. Bioregional identification with agriculture also means celebration of farming through public events and promotion of agro-tourism for visitors who would enjoy the quality of our working landscape. Achieving this goal will also entail broader educational opportunities for children and adults alike in order to understand agriculture as a business and appreciate the contributions it is making to life in Talbot County.

3. *Energy sufficiency.* As a relatively new force of change, energy offers major challenges but also promising opportunities for Talbot County agriculture. The latter include new markets for locally-raised grains, beginning with ethanol from corn and barley, biodiesel from soybeans, and eventually transitioning into the more energy-sustainable conversion of biomass from crop residues and grasses into biofuels. We believe these will evolve in tandem with energy conservation and waste recycling initiatives already being undertaken by Talbot County Government (Clarke, Forums II and IV). While it is unlikely that the County will be “energy independent” during the period covered by this vision plan, additional local markets can help keep distribution costs down and contribute to net profitability in the face of rising energy costs.

4. *Community support.* We envision agriculture and community as mutually supportive. Farming will continue, if not enhance, its contribution to the economy, culture, and rural quality of life that give Talbot County its special sense of place. In turn, the community will endeavor to support its agricultural enterprise. This entails more than just “buying local.” We believe that Talbot County can directly support agriculture by, *e.g.*, providing Eastern Shore brand recognition and other assistance to product distribution and marketing across the Bay, establish a revolving fund for making low-interest loans to beginning farmers, removing zoning restrictions and other impediments to the establishment of greenhouse operations, establishing a group health insurance program for farmers, expanding employment opportunities that will enable family members to obtain much-needed off-farm income, clarifying/simplifying liability considerations for farm visits by school children and the general public, and actively promoting agriculture as a tourism destination.

5. *Environmental quality.* It is our vision that Talbot County agriculture will become justifiably recognized as a contributor to the quality of the regional environment, including the water quality of Chesapeake Bay. To achieve this we will need to take advantage of the large amount of land that agriculture controls, making farming a more effective participant in nutrient reduction and habitat creation programs. While it remains a major challenge to achieve this vision, there is no guarantee that alternatives such as replacement of large-scale

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agriculture with management-intensive food crops or even with more residential development promise any less environmental impact. They certainly will have ramifications for our community and its sense of place, irreversibly changing the rural way of life that is so valued by residents old and new. Talbot County agriculture is a working landscape; our vision is to pass this on to future generations as an asset, not a burden, and to retain as much as possible the contribution it makes to our way of life.

Toward Realizing the Vision

Agriculture is an industry, farming is a business; both must be profitable in order to be sustained. At the same time, a community that actively supports its agricultural working landscape should expect that landscape to be maintained instead of being sold to development or environmentally degraded. Our vision plan recommends significant changes in the way we view and do things in order to take advantage of forces of change rather than merely react against them. In order to accomplish this, and to respond to the question “Who pays?” reasonably and equitably, we believe that the first steps toward realizing the vision require one or more business plans supported by careful analyses of anticipated costs and potential sources for meeting those expenses. Listed below are the steps that we recommend undertaking once the vision plan has been adopted as a framework for action. These actions would be best coordinated through collaboration between the offices of Talbot County Cooperative Extension and Talbot County Economic Development.

A Diversified Agriculture

1. *Complete studies and projects already underway that can provide for local production and use of bio-fuels.* These include private initiatives to construct regional bio-ethanol and bio-diesel plants using locally grown grains such as hull-less barley, and the current feasibility study on waste recycling and energy production being undertaken by the Talbot County Waste-to-Energy Committee under the auspices of County Government (Clarke, Forum IV). We encourage this study to include the use of local crops for biomass as a source of bio-fuels, either directly or via mesophilic and thermophilic digestion. If it proves economically feasible, Talbot County could conceivably operate on an energy-sufficient basis and pass the savings on to its farmers through purchase of local crops for fuel production. The goal is to provide large-scale grain farmers, especially, with viable economic alternatives in the face of changing global markets, the possibility of decreasing crop subsidies, and the likelihood of increasing public concern for reducing pollution from farmlands and other non-point sources into Chesapeake Bay.
2. *Participate in regional initiatives aimed at sustaining agriculture on the Eastern Shore, and promote Eastern Shore products through regional brand recognition and marketing.*
 - a. *Conduct a feasibility study for providing regional support for marketing produce and value-added products across Chesapeake Bay.* Elements of the plan could include a central location for farmers to deliver fresh produce and have it appropriately prepared/packaged with identity preservation, a fleet of one or more

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trucks to deliver the products to targeted markets and restaurants, and assistance in connecting market needs with farmers able to meet them. We specifically recommend exploring a formal partnership with Chesapeake Fields Institute, with the understanding that the initiative would include produce from small-scale entrepreneurial operations as well as value-added products derived from large-scale grain farms. As with any cooperative, farmers would be expected to contribute some financial support to cover operating expenses but in time these costs would be offset by increased profitability.

- b. *Join regional inter-jurisdictional efforts for sustaining agriculture on the Eastern Shore.* We strongly endorse the current initiative to establish a regional office responsible for agricultural economic development, supported by shared governmental funds and outside sources.

Connecting Agriculture and Community

3. *Create an agriculture leadership advisory board with representation from Talbot County Cooperative Extension, Talbot County Government, Farm Bureau, farmers, and the broader business community.* This group would meet periodically to review and advise business-related initiatives undertaken as a result of the vision plan.
4. *We recommend that the Talbot County Council recognize agriculture as a significant industry sector that contributes to the existing County economy and prioritize support for continued agriculture development through the retention and expansion of agriculture-based business.* The Vision Plan suggests that the County departments cooperate with state and federal agencies to identify and track agriculture-based projects and identifies resources to support the permitting process, technology adaptation, job growth, and efficient operations. We encourage the Council to explore the options for establishment of a low interest loan program for new farmers as a way to promote the continued and productive use of agriculture land. We also recommend the Council's consideration and support for the elimination of the estate tax burden on farms with permanent conservation easements that commit to agriculture production for a minimum of five years. Lastly under this recommendation, we encourage the Council to consider the creation of "agriculture industrial" zoned land in the next Comprehensive Plan update as a method to support hubs for agriculture production, research, and education on lands devoted to these uses.
5. *Provide training for new Talbot County Farmers and those wishing to diversify or change their operations.* Topics for special training sessions could include, *e.g.*, "Specialty Crops," "Starting a New Farm," and "Networking for Better Marketing." Such short courses could be organized by Talbot Cooperative Extension in conjunction with programs at Chesapeake College. At the same time, expand the number of paid internships available through Cooperative Extension to young people who are interested in agricultural careers.

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6. *Actively promote Talbot County agriculture as a tourism destination.* It is incongruous to identify Talbot County as a culinary destination for wonderful foods that are not prepared from local products. However, the Office of Tourism cannot promote what is not available. Our working landscape needs to be more open to the public and impediments to visits by tourists removed. An organized and widely advertised farm weekend highlighting locally grown products, offering farm tours, promoting recreational use of the working landscape, and even providing culinary opportunities would be one place to start. Because such actions would involve re-prioritization of operating funds as well as legal efforts by the Talbot County Council to resolve liability issues, initial costs would be minimal. It is our belief that there would be economic return sufficient to sustain this effort.

Connecting Agriculture and Environment

7. Reinvalidate the Talbot County Waste-to-Energy Initiative as a potential market for locally-grown biomass for ethanol production.
 - a. In particular, continue to explore the feasibility of using warm-season grasses as a new source of bio-fuel that can reduce costs and increase net profitability of the County's large-scale grain enterprises.
 - b. Work with the Natural Resource Conservation Service (NRCS) and the Talbot Soil Conservation District to provide cost-share opportunities to create temporary grassland habitat for small-scale agricultural operations, for example, those electing to transition from conventional to organic farming.

A Final Recommendation

8. *Establish a Talbot County demonstration farm for education, tourism, and research.* This recommendation represents the embodiment of our collective vision. Such a farm, perhaps included with other working enterprises in a new agriculture industrial floating zone, would show current large- and small-scale farming practices and serve as a location for exploring new methods of production. Intensive monitoring would evaluate the impacts of current and modified practices. The farm would be a destination for school children, local citizens, and tourists alike. In addition to class field trips, it would contribute to hands-on education through paid internships for high school and college students. It could also serve as a heritage museum, tracing the evolution of Talbot County's working landscape from its use by Native Americans to modern farming today. It could become the lynchpin of an agriculture industrial zone. Funds for operation would come largely from extramural sources, including gifts from appropriate foundations and grants for research, education, and outreach. We recognize that this recommendation represents something of a dream that, even if it can be realized, will only evolve over time. But if the dream is realized it will be a place that is our home in miniature where people can experience, learn, and understand why the citizens of Talbot County have endorsed a vision for sustaining agriculture because of its contribution to

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community, quality of life, and unique sense of place for themselves today and for generations tomorrow.

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APPENDIX 1

Steering Committee Members

We are grateful to these citizens and officials for their commitment to seeing the visioning project through to completion. All of us are indebted to the nearly 100 citizens who gave so much of their time in producing the Talbot County 2005. Without their guidance as provided in the Comprehensive Plan, this vision would require assessment of County resources that is beyond the scope of our project..

Chair

Ms. Shannon Potter Dill
Agriculture Educator and County Co-Director
Maryland Cooperative Extension, Talbot County

Mr. Andy Andrews
Consultant, American Farmland Trust
Executive Director
Pennypack Farm CSA
Horsham, PA

Ms. Elizabeth Beggins
Pot Pie Farm and FreshFarm Markets
St. Michaels, MD

Ms. Virginia (Vicky) Carrasco
Coastal Communities Specialist
Maryland Sea Grant Extension Program
Department of Agricultural and Resource Economics
University of Maryland

Mr. Peter A. Carroll
Talbot County Council

Mr. Robert Hutchison
Co-Proprietor, Hutchison Brothers' Farms
Cordova, MD

Ms. Elizabeth "Beth" Jones
Bay Hundred Foundation
Consultant to Town Creek Foundation
Easton, MD

Mr. Lewis Smith
President, Talbot County Farm Bureau

Mr. John Trax
Talbot County Economic Development Commission

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Dr. Philip Favero
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Mr. Daniel Nees
Coordinator, Environmental Finance Center
University System of Maryland

Ms. Alana Wase
Senior, Program in Environmental Studies
(graduated May 2006)
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Chestertown, MD 21620

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APPENDIX 2

Public Forums and Guest Presenters

We thank the Historic Avalon Theatre for providing such an excellent venue for public discussion of matters that relate so importantly to Talbot County's sense of place.

Public Forum I, April 3, 2006

"Learning Lessons and Lessons Learned"

Mr. Brian Price

Executive Director, Leelanau Conservancy, MI

Mr. Larry Mawby

President, Village of Suttons Bay, MI

Mr. Rob Manigold

Supervisor, Peninsula Township, MI

Public Forum II, April 24, 2006

"Sustaining Grain Agriculture: Energy and Value-Added Opportunities"

Mr. Lawrence J. Russo, Jr.

Office of the Biomass Program
US Dept. of Energy

Mr. Raymond Clarke

County Engineer, Talbot County

Mr. Robert Hutchison

Hutchison Brothers Farms, Cordova, MD

Mr. John Hall

President, Chesapeake Fields Institute
Chestertown, MD

Public Forum III, May 22, 2006

"New Markets, Niche Markets"

Ms. Ann Yonkers

Fresh Farm Markets, Washington, DC

Mr. David Lankford

Davon Crest II Farms, Trappe, MD

Mr. Christopher Fullerton

Tuscarora Organic Growers Cooperative
Hustontown, PA

Ms. Debbi Dodson

Executive Director
Talbot County Office of Tourism

Public Forum IV, August 28, 2006

"Environmental Opportunities"

Mr. Raymond Clarke

County Engineer, Talbot County

Mr. Teresa Kampmeyer and Mr. Craig Zinter

USDA Natural Resources Conservation Service

Dr. Douglas Gill

Professor of Zoology, University of Maryland

Dr. Kenneth Staver

Wye Research and Education Center
Maryland Agricultural Experiment Station
University of Maryland

Ms. Heather Buritsch

Talbot County Cooperative Extension

Public Forum V, October 25, 2006

"The Draft Vision Plan"

Dr. Frederick Kirschenmann

Director, Aldo Leopold Institute for Sustainable Agriculture
Iowa State University