

MARYLAND BEGINNING FARMER GUIDEBOOK

A guidebook to help
Beginning Farmers
explore, refine, develop,
and implement a
successful farm in
Maryland.

www.extension.umd.edu/newfarmer

This material is based upon work that is supported by the
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BEGINNING
Farmer Success 

Foreword

The Beginning Farmer Guidebook was developed as part of the Maryland Collaborative for Beginning Farmer Success program and is intended to be a resource for agricultural service providers and farmers in the region. The guide should be used as a companion to the Beginning Farmer Success website <https://www.extension.umd.edu/newfarmer> which contains additional resource material to support farmers in Maryland.

The Guidebook contains various publications often requested by beginning farmers. Each publication may be used as a standalone document or in conjunction with other material. Authorship of each publication is indicated on the actual document.

The Maryland Collaborative for Beginning Farmer Success builds on existing University of Maryland Extension resources and partnerships with Future Harvest-CASA; Southern MD Agriculture Development Commission, University of Maryland Eastern Shore, regional nonprofits, agricultural organizations, and experienced farmers to provide beginning farmers with easily accessible tools and practical experience-based training on farm production, marketing, land management, business planning, and financial resources.

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- <https://extension.umd.edu/newfarmer> - Sign up online for newsletters and announcements of workshops, conferences and other events
- <https://www.facebook.com/beginningfarmersuccess>
- <https://twitter.com/NewFarmerMD>
- <http://www.youtube.com/c/UMEBeginningFarmerSucess>

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University of Maryland Extension (UME) is part of the University of Maryland, College of Agriculture and Natural Resources and extends non-formal, research based knowledge and resources from campus to each of the 23 Maryland counties and Baltimore City and 5 research stations. There is an office in each county and Baltimore City. These offices offer a number of farm and community programs and would be a great resource to a new and beginning farmer getting started. Contact your local Extension office to get on their email list to find out about farm and educational programs in your area. To find your local Extension office visit - <https://extension.umd.edu/locations>.

UME Beginning Farmer Success Program - Established in 2012, the UME, Maryland Beginning Farmer Success Project provides new farmers with resources and contacts to be able to explore enterprise options, refine business ideas, develop strategies, and implement their farming practice. The goal is to increase the number of successful beginning farmers and the acreage farmed by them. This statewide program uses a number of education and outreach methods to connect new farmers with the information and tools they need to be successful. **These include: field days, workshops, coaching, conferences, email blasts, online education.**

University of Maryland Crop/Livestock Production Information

Agriculture Links	www.extension.umd.edu/topics/agriculture
Aquaculture	www.extension.umd.edu/aquaculture
Beginning Farmers	www.extension.umd.edu/newfarmer
Equine	www.extension.umd.edu/horses
Field Crops	www.psla.umd.edu/extension/md-crops www.extension.umd.edu/grain
Grain Markets, Leases, Custom Rates	www.extension.umd.edu/grainmarketing
Grapes and Fruit	www.extension.umd.edu/smallfruit
Marketing	www.extension.umd.edu/agmarketing
MD Rural Enterprise Development Center – business planning, value added	www.extension.umd.edu/mredc
Environment and Natural Resources	www.extension.umd.edu/topics/environment
Nursery, IPM landscape, greenhouse	www.extension.umd.edu/ipm
Pastures	www.psla.umd.edu/extension/maryland-forages-program
Plant Clinic – plant pest diagnosis	www.extension.umd.edu/plantdiagnosticlab
Poultry – Small Flock	www.extension.umd.edu/poultry
Sheep and Goat	www.extension.umd.edu/sheep-goats
Vegetables	www.extension.umd.edu/mdvegetables
Urban agriculture	www.extension.umd.edu/urbanag

BEGINNING FARMER ROADMAP

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Farmer Success 

Farm Establishment

- ★ Acquiring a Farm Property
- ★ Understanding Zoning for Farms
- ★ Soil Health
- ★ Farmland Preservation
- ★ Resources

I like agriculture and want to start a farm!

I have a farm and not sure what to produce.

Enterprise Selection

- ★ Formulate a Farm Strategy
- ★ Organic Certification
- ★ Farm Equipment
- ★ Food Safety
- ★ Resources

I have a product and need a plan.

Business Planning

- ★ Farm Business Planning
- ★ Financial Planning
- ★ Master Marketing
- ★ Resources

I have a plan and am ready to start farming.

Start Farming

- ★ Licenses, Permits and Certifications
- ★ Human Resources
- ★ Labor Laws
- ★ Insurance Overview
- ★ Resources

On your way to establishing a successful farm!



Table of Contents

Farm Establishment

Considerations for Acquiring a Farm Property
Understanding Zoning For New Farm Enterprises
Understanding Soil and Soil Health
Overview of Farmland Preservation in Maryland
Resources and Web links
Farm Establishment Review

Enterprise Selection

Formulate a Farm Strategy
Organic Production and Certification
Understanding Farm Equipment Needs
Food Safety Overview
Resources and Web links
Enterprise Selection Review

Business Planning

Farm Business Planning
Financial Planning Considerations for Beginning Farmers
Master Marketing for New and Beginning Farmers
Resources and Web links
Business Planning Review

Start Farming

Understanding Licenses, Permits and Certifications for your Farm
Human Resources Management and the Hiring Process Basics
Agricultural Labor Laws
Insurance Overview
Resources and Web links
Start Farming Review



Farm Establishment

Considerations for Acquiring a Farm: Selecting the Best Farm Property

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Disclaimer: The following is intended for educational purposes only and is not legal advice.

A successful farm operation requires thoughtful property selection, whether you are leasing or purchasing land. When looking at properties, you need to consider how the property will support the goals in your business plan. Will the farm be productive? Will the location and regulatory environment fit into your marketing strategies, or can you adjust your strategies to suit your income needs? Is the price of the farm reasonable and realistic given your financial goals? Are there any zoning, covenant, easement, or plat restrictions that might prevent you from producing or selling what you want, where you want?

Maryland farmers are fortunate to have strong regional market opportunities and many farms contain soil types that will grow a wide variety of crops. However, because Maryland has the fifth highest population density of any state in the nation and is divided by the Chesapeake Bay and its tributaries, Maryland has greater need to regulate land use for the health, safety, and welfare of its citizens than other rural states. Much of the land currently in agriculture is available because of zoning, covenants, easements, or plat restrictions that limit non-agricultural uses.

Lease or Purchase?

Many beginning farmers lack the financial resources to buy land, or they would rather invest in their farm business rather than tying up all their capital on land purchase. Land leasing is a viable option in Maryland. The majority of farmland is leased on a year-to-year basis for grain or forage production. A disadvantage of leasing is that it is difficult to secure leases long enough to be comfortable making major improvements to a farm. If you know what your long term business plan is and you can find a property that fulfills the needs, then land purchase may be the best option.

Several resources exist online to help beginning farmers understand leasing options and what to look for in leasing agreements. The University of Maryland Extension and Agriculture Law Education Initiative provides legal resources to help farmers looking to lease www.umaglaw.org. Loan options for land or infrastructure purchase are available at the federal and state levels, including: USDA loans, the Farm Credit System, and Maryland Agricultural & Resource-Based Industry Development Corporation (MARBIDCO). Maryland FARMLink has a land link service that aims to connect those who want to sell or lease farmland with those who want to buy or lease.

Utilizing a Farm Real Estate Agent

When you begin the search for a farm property, consider utilizing the services of a quality farm real estate agent. A good agent will be knowledgeable on what to consider when purchasing farmland, will have an idea on what to expect during the transaction, and can make the process less stressful. An agent will serve on your behalf and will often be able to catch land caveats.

It is important to understand how a real estate agent is typically paid and who represents the buyer and seller. The Maryland Real Estate Commission (MREC) has prepared a document entitled “Understanding Whom Real Estate Agents Represent” that explains the roles of each agent in different circumstances <http://www.dllr.state.md.us/license/mrec/mrecrep.shtml>.

When buying a farm property, you may engage the services of a real estate agent to help you in the process. The buyer’s agent can only prepare offers and negotiate in the best interests of the buyer after a written agreement has been signed between the buyer and the buyer’s agent. This written agreement will contain the provisions of the agreement, including how the agent will be paid and the timeline. The buyer’s real estate agent will represent the buyer’s interest in the transaction. According to the MREC, a seller’s agent “works for the real estate company that lists and markets the property for the sellers and exclusively represents the sellers. That means that the seller’s agent may assist the buyer in purchasing the property, but his or her duty of loyalty is only to the sellers.” In some cases, the same broker may represent the seller and the buyer, however this must be disclosed in writing and agreed to by all parties.

The seller of the property will typically pay the entire cost of the agent/broker fee. This fee is normally a percentage of the selling price of the property, and typically ranges from 5 to 7%. The fee is split between the buyer’s agent/broker and the seller’s agent/broker (normally equally) based upon the agreed upon terms of the contract. For example, if a property sells for \$300,000, and the agreed upon fee is 6% split equally, the seller will pay a 3% fee to the buyer’s broker/agent and a 3% fee to the seller’s broker/agent. While this arrangement is typical, the terms can vary widely and are governed by the agreed upon terms stated in the contract. Some buyer agents may require an administrative fee or may stipulate a minimum guaranteed amount for their services.

The fees for real estate agent services are transferred during the settlement process. In situations where the property is offered for sale by owner, without the use of a real estate company, the buyer’s fee will need to be negotiated with the seller. The seller is not under any obligation to pay buyer agent’s fees.

Finding a good farm real estate agent is not as hard as you might think. Maryland FarmLINK has a listing of realtors who have professional training on issues related to buying and selling farmland. Realtors going through this training are given information on zoning and planning issues that impact agriculture, how to check soils on the property, how to check if the property

is enrolled in a conservation easement or other conservation program, how to handle agricultural leasing issues, and how the septic law can impact agricultural properties. The listing does not currently cover all Maryland counties, but the training is on-going and more realtors are added in additional counties as the course is completed across the state. Before picking a realtor, take your time to do the research to make sure that they have the skills you need when purchasing new farmland.

Finding General Information about a Property

There are multiple avenues available for researching general information regarding farms. The obvious place to start is the landowner offering the property for sale. Realtors can also help to provide information.

Review Property Assessment Data

Maryland offers a free Real Property Search database where you can search for property information using either an address, tax ID number or map/parcel number. You can obtain records such as the tax assessed value of the property, prior property sales data, deed reference, map/parcel number, account ID, legal description, use classification, and name and address of the current owner. The Real Property database is often a good place to start to find information on a property <https://sdat.dat.maryland.gov/RealProperty>.

Review the Deed and Plat

Maryland offers access to all verified land record instruments through MDLandRec <http://mdlandrec.net> which is a digital image retrieval system for land records in Maryland. This service is currently being provided at no charge to individuals who apply for a username and password. After obtaining a username and password you can search by county for land records based on name or by deed reference number. Note that not all properties have recorded plats. All properties should have a recorded deed however. Interpreting deeds can be a difficult task and it is advisable to seek legal assistance when conducting deed research.

Using GIS Mapping Software

Online mapping tools can also be useful for garnering more information about the history, location, topography, surrounding farms, building locations, and more. Many county governments use GIS mapping systems as part of their planning and zoning information systems. Check the individual county government website to see if your county offers this service. Other free public mapping software, such as Google Earth, can be used to visualize aerial photographs of the property, and have measuring software for determining approximate acreages of farm fields, proximity to water, and historical imagery. For example, you can use Google Earth to toggle between historical imagery and visualize changes in land use over time.

Identifying Land Use Restrictions

Most open farmland in Maryland can be used for commodity crops. However, before signing a lease or purchasing a property, it is best to be safe and determine if there are any land use restrictions, particularly if you are considering direct farm sales or value-added sales (e.g. wineries, creameries, etc.), or agritourism (e.g. corn mazes, on-farm weddings, etc.). For an explanation of the many types of zoning restrictions that could impact the use of farmland, refer to the chapter on *Understanding Zoning for New Farm Enterprises*. Also refer to *Overview of Farmland Preservation in Maryland* for more information on how conservation easements may restrict land use options and development potential.

Zoning Ordinances

Nearly every county in the country has a zoning ordinance and each one is different. However, most counties use similar zoning terminology and most in Maryland are available on-line, along with the zoning maps which define where the ordinances apply. If you are unsure about a particular use, visit the Planning and Zoning office in your county for more information.

Covenants and Easements

A covenant or easement is a written agreement, usually recorded in land records, that applies conditions to the use of the property. To be fairly certain as to whether or not there are covenants on a property, you will need to consult with your attorney about obtaining a title search. However, you can do some initial research on your own. You may ask the owner or owner's agent if there are covenants. If you are leasing, not purchasing, your quest for information might stop there. However, you might want to note the response in a lease agreement. Reading through the deed, you might find special covenants or conditions that apply to the land. This is by no means a failsafe method. The covenant may have been recorded after the deed was recorded or the attorney may not have mentioned the covenant specifically in the deed. However, the deed may contain some information that you may want to learn early in the property selection process.

Plat restrictions

Many properties will have a corresponding plat recorded in the land records. Plats may contain notes or conditions that are binding upon future owners of the property. Plat notes may indicate where access to the property is restricted, whether or not the property may be further divided, where a storm water easement crosses a farm, and so on. Plat conditions may describe permit requirements, land clearing limitations, forest buffers from streams, etc.

Evaluating Farm Soils

Experienced farmers often provide one piece of advice to those looking for farmland: "*Shop with a Shovel*". In other words, be sure to fully investigate the inherent characteristics of the soil before you buy. Soil characteristics, such as texture, drainage, depth to water table, or depth to restrictive layer can vary greatly across a region, county or even the same field. In general, prime farmland contains deep, well drained soils without restrictive features such as steep slopes.

How do you find out about the soils on a particular farm? USDA's Natural Resource Conservation Service (NRCS) provides on-line soils mapping data that describes the type and features of soils by exact location in Maryland. NRCS developed a website, titled the Web Soil Survey <https://websoilsurvey.sc.egov.usda.gov>, where you can determine soil classification, ratings, and suitability for your type of farming operation as long as you know the approximate boundaries of the farm. You may want to start with the tutorial or you can go straight to the USDA Web Soil Survey if you are familiar with basic web mapping tools and understand soils nomenclature. Unless the farm is irrigated, you will want to view the "non-irrigated capability class" under Land Classifications. Further, talk to farmers that are familiar with the farm and ask the opinion of your local Soil Conservation District and/or University of Maryland Extension staff.

Soil structure, or how well the soil particles are held together, is another component of soil quality that needs to be evaluated. A friable, porous soil with good organic matter and microbial activity will support plant life much better than a compacted soil with poor structure. Soil structure can be improved over time with good management and the addition of organic matter.

Testing your Soil

Soil testing provides a snapshot of the fertility level of the soil, including levels such as pH, Phosphorous, Potassium, Calcium, Magnesium, and micro-nutrients. When selecting a farm, soil fertility is not as important as the inherent soil properties such as drainage or soil type because poor soil fertility can be improved over time (2-3 years) with the addition of organic matter, manures, fertilizer, lime and amendments. Soils with lower fertility values will require a larger upfront investment in lime and other nutrients, however these costs are minor in comparison to correcting drainage or erosion issues. Soil fertility levels are a more important consideration if leasing farmland for a shorter period of time, due to the shorter payback window. For more details on soil testing, refer to the chapter *How to Take a Soil Sample* for testing steps.

In Maryland, regulations limit the amount of manure, fertilizer, or other amendments containing phosphorus that can be applied to soils with excessive phosphorus fertility levels. This restriction should be a consideration for organic farmers who may not be able to use non-P bearing materials for nitrogen sources and/or livestock farmers who need land for manure application. If you intend to conduct soil testing, after you have signed a contract to purchase but before the final sale, remember to include a contingency in the purchase contract to allow you the time to conduct the testing and the right to terminate the purchase if you are unhappy with the soil test results.

Water Quality and Availability

Most intensive crops require some type of irrigation. Livestock require daily access to a clean water supply. Farm water sources can include public or municipal water, deep artesian wells, ponds, freshwater rivers and/or shallow wells. Check artesian wells for the gallon per minute

water flow and size of the pump installed. Typically, the county health department can provide information on well depth and flow rate based upon the well ID number. Ponds vary greatly in their recharge capacity and size, so ask when the pond was last used for irrigation, how deep it is and if the pond ever goes dry. Drip irrigation will require relatively clean water to prevent clogging of the sand filters and drip tape. It is also advisable to ask if the farm currently has a water appropriation permit (required if using on average over 10,000 gallons per day) if used for agricultural irrigation. If you are buying a farm with the intent of conducting value added processing, you will need to consider the potability of the water source. Water used in food processing activities must be able to meet strict potability standards. Public or municipal water and deep artesian well water typically will meet potability standards. Shallow dug wells, ponds and springs will typically not meet potability standards. In addition food safety regulations, Good Agricultural Practices (GAP) and the Food Safety Modernization Act, require water to be tested routinely to ensure it is safe for use in produce production. As mentioned above, if you intend to conduct water testing, after you sign a purchase contract but prior to the final sale, consider including a contingency in the purchase contract to allow for the time and ability to terminate the contract based on the results of the water testing.

Other Considerations

Neighbors

After you make the real estate purchase, what kind of neighbors will you have? Knowing your neighbors will give you an idea early on of the types of issues you may experience using the property. In Maryland there are state and county Right-to-Farm laws which provide farmers with a defense that can be asserted, in certain circumstances, when neighboring property owners make nuisance claims. The best preventative measure for neighbor relation issues is communication. Although it is not a guarantee, establishing good communication with neighbors can help minimize legal issues, based on a misunderstanding, from interfering with your farm operation.

Timber Value

When buying a property, it is always a good idea to estimate the market value of existing timber. Timber can have significant value, which will affect the overall value of the property. Consult with a public or private forester to estimate the value of the existing timber as well as when timber will be ready to harvest. Asking the current landowner when the timber was last cut and whether there is a timber management plan is also helpful.

The Value of a Title Search

As mentioned previously, a title search is an essential step before purchasing a property. This is not a step you will be able to skip or adequately complete on your own. A qualified attorney or title company, by performing a title search, can determine what easements or other restrictions exist on the property. It is common for farmland to be burdened with easements, such as utility rights-of-way or access easements for neighboring property owners. A title search will allow the purchaser to have a full picture of the extent of these types of property

interests. A conversation with the seller or the seller’s agent will often not include mention of the details that will emerge through a title search, and these interests may not be unearthed during a zoning review. Your real estate agent or your lender will typically be able to recommend a local title company who can perform the search and offer title insurance.

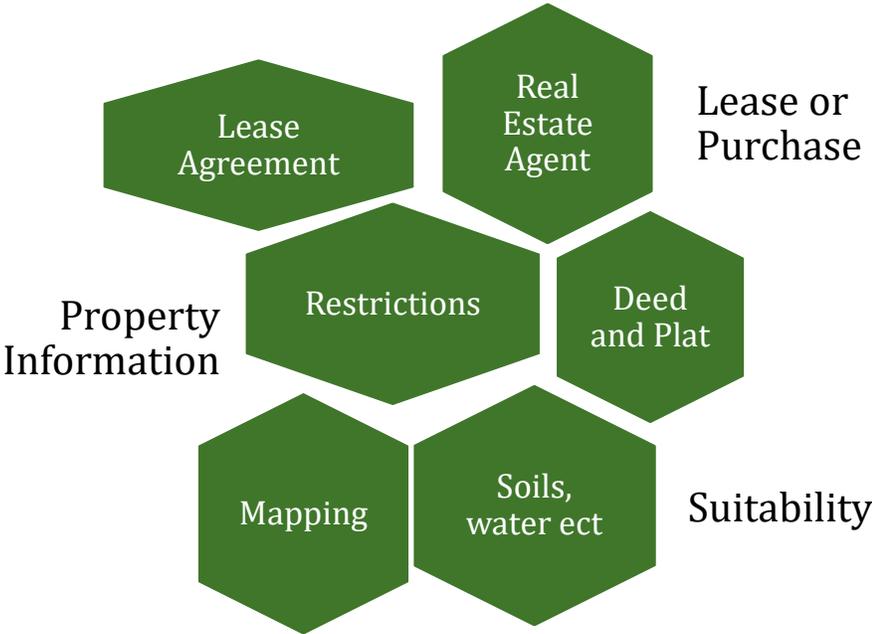
Land Preservation Programs

Land Preservation programs provide a financial incentive (normally a cash payment, though tax credits are also used) in return for the property owner giving up future development rights. The use of land preservation programs is one method to lower the effective price of a farm. While land preservation programs impose some limitations on the use of property (see covenants and easements above), they provide an economic incentive to maintain property as farmland in Maryland. Being in a community of preserved farms provides stability and permanence. Farmers are more likely to invest in their farm enterprises if they know that neighboring farms will not be developed in the near future.

Maryland offers some of the most progressive land preservation programs in the country. There are several types of land preservation programs that operate in Maryland including the Maryland Agriculture Land Preservation program (MALPF); Maryland Rural Legacy program; and Maryland Environmental Trust program.

Conclusion

Selecting the right farm property is one of the most important tasks to ensure success as a beginning farmer. Taking time to research a farm’s potential productivity, land-use restrictions and capability before committing to a long-term lease or purchase will pay off in the long run.



Understanding Zoning For New Farm Enterprises

Sarah Everhart, Managing Director, Agriculture Law Education Initiative, Maryland Carey Law
Disclaimer: The following is intended for educational purposes only and is not legal advice.

Introduction

Choosing the right piece of land can be one of the most important parts of a new farm enterprise. Unfortunately, fully appreciating the zoning of a piece of property is not as easy as looking at a map. A single piece of property in Maryland can have multiple zoning and planning designations which all need to be understood to completely answer the question of whether it is the right property for a farm enterprise.

Local Zoning

Starting at the local level, a person interested in the zoning of a piece of property can visit the county, or the town if the property is within municipal limits, zoning office. Some jurisdictions have the zoning map online but, to be sure the zoning map is the most current version, it is advisable to confirm with a phone call or a trip to the local office. Every property has a zoning designation such as “Rural Residential” or “Rural Conservation.” In some cases, a piece of property may have more than one zoning designation, this is referred to as split zoned.

In the zoning ordinance, or applicable section of the local jurisdiction’s code, the zones will be described and the uses that are permitted, prohibited, conditionally permitted or permitted by special exception will be listed. Conditionally permitted uses are typically uses that are allowable subject to conditions found within the zoning code. A use that is permitted by special exception, will require a hearing and approval from the local board of zoning appeals. A hearing in front of a zoning board of appeals is a quasi-judicial proceeding which can be a challenge to navigate without legal representation.

For all uses, it is important to understand the full extent of what is permitted in the zone and to consider whether zoning restrictions will allow for the farm enterprise to operate fully. For example, if a farmer is contemplating incorporating a retail greenhouse component into an operation, it is necessary to ensure that both the use (retail) and the erection of the greenhouse building and any required parking area is permitted in the zone. If it is difficult to decipher whether a use is permitted from a review of the zoning ordinance, you can either consult the zoning staff or retain legal counsel to advise you.

If a property is not zoned to permit a use it can be very difficult to change the zoning designation. In Maryland, local jurisdictions undertake the comprehensive rezoning every 10 years. Outside of a comprehensive rezoning, in order for a property owner to be granted a change in zoning he or she must prove the zoning should change due to a substantial change in the character of the neighborhood or because of a mistake in the original zoning.

Types of Zoning

If the property in question is within 1,000 feet of the waters of the State's tidal waters or wetlands, in addition to the base zone, it will also have an overlay Critical Area zoning designation. Most farmland in the Critical Area is designated as a Resource Conservation Area (RCA), but if your property is adjacent to residential development it could be designated as a Limited Development Area (LDA). Critical Area designations add another layer of zoning restrictions on land such as buffers from sensitive areas.

Another layer of zoning designation in Maryland is the growth tier designation. Pursuant to the Sustainable Growth & Agricultural Preservation Act of 2012, all properties in MD should have a growth tier designation. The tiers are based on whether or not a property is served by a wastewater treatment plant, planned to be served by a wastewater treatment plant, could be developed with properties served by septic systems, or whether the land is planned for agriculture or conservation. Tier designations may not impact all farm enterprises, however, a tier designation is important if you plan to develop (build residences, subdivide, etc.) a property. Tier maps can be found at the local jurisdiction's zoning office or on the MD Department of Planning's website.

Planning Documents

Local jurisdictions also create long-term planning documents called comprehensive plans. Although comprehensive plans are technically planning rather than zoning tools, the plans can have a great impact on the use of property, both now and in the future. In these plans, a local jurisdiction classifies the current and future plans for all the property within and surrounding the political boundaries of the jurisdiction. Comprehensive plans are updated every 10 years and it is important to examine these documents to understand the jurisdiction's future plans for the property in question and the surrounding properties. For example, a comprehensive plan may indicate a property is bordered by land designated for future heavy industrial uses. Further, local jurisdictions are required to make zoning decisions which are consistent with the comprehensive plan. No one can predict future development with certainty, but looking at a jurisdiction's comprehensive plan can provide you with valuable information about the planned future uses of properties.

Conclusion

A person interested in a piece of property for a new farm enterprise should not assume, based on the current use, that the property is not necessarily zoned for either that use or related uses. When a local jurisdiction undergoes a comprehensive rezoning, in some instances, certain uses may be allowed to continue despite the updated zoning no longer allowing the use. These uses are referred to as non-conforming uses. Non-conforming uses are typically allowed to continue, but, are subject to limitations such as a prohibition on expansion and may be disallowed all together if the use is abandoned for a certain period to time. Although, a person who is interested in a piece of property for a farm enterprise can, by taking the steps outlined above, find out a good deal of information about the property, it is always a good idea to consult with an attorney experienced in land use and real estate matters before signing any contract or lease for a new farm enterprise.

Understanding Soil and Soil Health

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How well you understand soil, and how well you manage the soil's health, will have a large impact on the productivity of the farm. This section will introduce key concepts that will help understand soils and good farming practices that will help manage overall soil health.

What is soil?

Soil is the result of a mind-bogglingly long process wherein the rocks of the earth's crust are gradually broken down into very small particles by the environment and living organisms. Soil is made of tiny particles of rock (sand, silt, and clay are size classes of tiny rock particles), dead biological material (organic matter), and living organisms (from "macroinvertebrates" like worms down to microbes, fungi, and viruses).

How can I learn about my soil?

Soils have physical and chemical properties that affect how well the soil can grow plants. Important soil properties include layers, depth, texture, structure, compaction, density, fertility, pH, cation exchange capacity (CEC), organic matter, drainage, and water holding capacity. Additional references to help you learn about some of these properties are listed below in the *Additional Reading* section.

You can get a rough assessment of some soil properties by looking at the soil itself. A soil laboratory can conduct more precise tests of your soil's properties which will give you more accurate, actionable results. The following paragraphs will describe some of these resources in more detail.

In Maryland, the geographic location of your farm will dramatically affect what kind of soil you have to work with. Broadly, Maryland can be broken up into three soil categories: Appalachian Mountains, Piedmont plateau, and Coastal Plain (Fig. 1). A lot of soil diversity exists within these regions, but in general mountain soils tend to be more rocky and steep, the Piedmont plateau tends to be gently hilly with many small streams and a loamy soil texture, and the coastal plain tends to be marshy with patches of mostly sand texture and patches of mostly clay texture.

To find detailed information about the soil on your specific farm, the best place to start is the Web Soil Survey, which is a searchable digital soil map operated by the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). Read in particular what the soil map says about your soil's texture, drainage class, and slope.

Major Land Resource Areas for Maryland and the District of Columbia

March 15, 2012

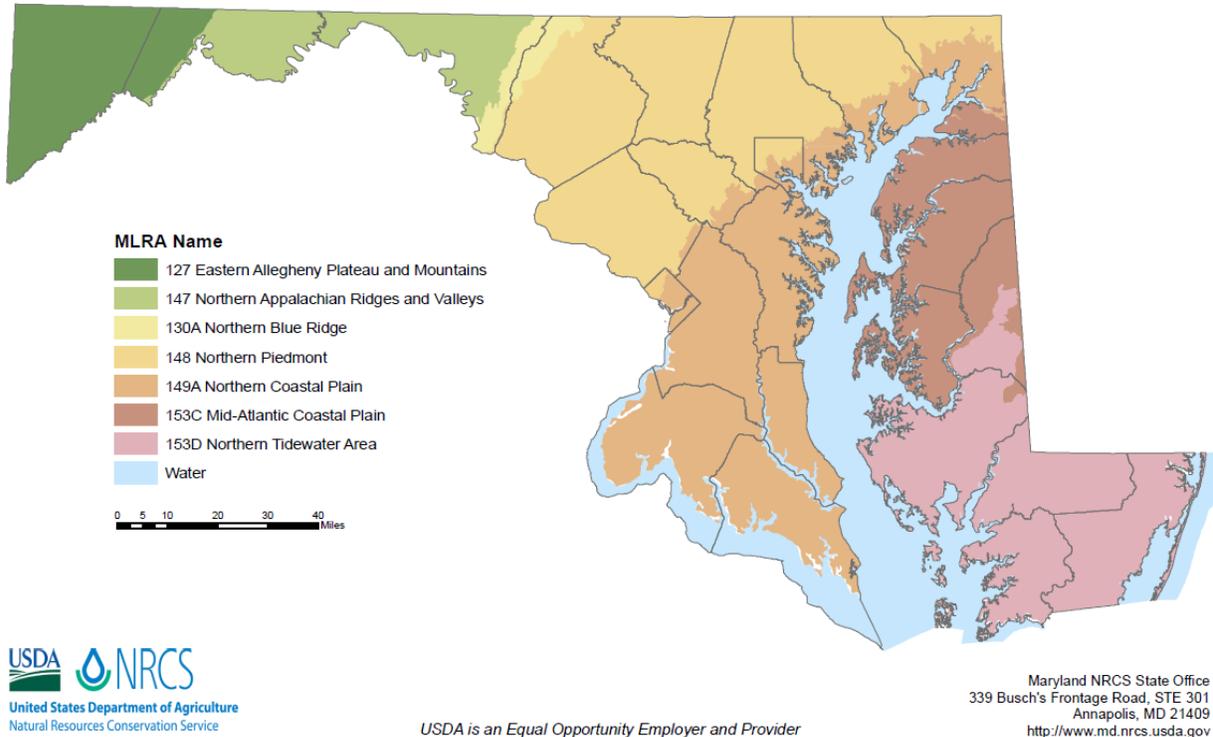


Figure 1: Maryland's soil regions, as mapped by the USDA-NRDCs. Broadly, Maryland can be broken up into three soil categories: mountains (127,147,130A), Piedmont plateau (138), and coastal plain (149A,153C, 153D).

Texture is arguably the most important property of a soil. A soil's texture is its ratio of sand, silt, and clay (the different size classes of soil particles). At the scale of a farm field soil texture is impossible to change, and soil texture affects many of the other properties, such as drainage, water holding capacity, and fertility. For more information about soil texture, see the *Additional Reading* below.

Note that in small fields and in urban areas the soil maps on the Web Soil Survey may not be as accurate. It is important to check how the Web Soil Survey predicts the soil within an area. Both quick field methods and accurate lab methods have a role to play in this process. Field-based soil quality measurement methods are fast, inexpensive tools to get a qualitative "feel" for your farm and laboratory soil testing methods are the gold-standard for quantitatively measuring your soil's properties so that you can make informed management decisions. The USDA-NRCS offers detailed information about both field-based and laboratory soil analysis methods: <https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>

Soil testing

Different testing methods are used to measure different qualities of the soil. There is no one soil test that will tell you everything. Before doing a soil test, you need to know what soil property to measure. The most common test is a soil fertility test, which typically measures a soil's pH, organic matter, and nutrient availability. All three of these soil properties are extremely important to the soil's fertility -- its ability to grow high yielding, high quality crops.

The pH scale is a measure of the balance of hydrogen ions (H⁺) and hydroxide ions (HO⁻) in the soil. At the low end of the pH scale, there are many hydrogen ions and the soil is considered acidic. At the high end of the pH scale there are many hydroxide ions and the soil is considered basic. A moderate pH, between 6 and 7, is ideal for most crops. In this pH range, plant nutrients are most available to the plants' roots, and elements that are toxic to plants, like aluminum, are bound tightly to the soil particles. For more about pH, and how to get it in that ideal range, see the *Additional Reading* section below.

Organic matter is dead biological material in varying states of decay. Organic matter is an important source of slow-release nutrients for plants and other organisms in the soil. Organic matter also increases the soil's water holding capacity and can improve soil structure. An organic matter measurement of 3 to 4% is considered good. For more on how organic matter affects soil quality, see the *Additional Reading* section below.

Plants need nutrients, like nitrogen (N), phosphorus (P), and potassium (K) to build their bodies. A soil fertility test will report the amount of "plant available nutrients." This is different from the total amount of nutrients in the soil, because a large proportion of the nutrients are bound into minerals and organic matter where the plant roots cannot access them. These bound up nutrients may become available in future years, but they will not be available in the current growing season. Soil fertility test methods have been developed to estimate the amount of nutrients that are available to plants, and to predict whether adding additional nutrients will increase crop yields.

Different soil fertility tests have been developed to be specific to the soils and climate of different geographic regions. This is why it is important to use a soil testing lab recommended for your state. For example, the plant nutrient nitrogen is very mobile in water, and here in Maryland we get a lot of rain. Because of this, in Maryland by the time you collect a soil sample, mail it off to the lab, and get your soil fertility test results back, the amount of available nitrogen in the soil has probably already changed. For this reason, in Maryland most soil tests will not report nitrogen availability and will instead recommend adding nitrogen to your soil based on book values for how much nitrogen different crops will need. It is also recommended to add nitrogen in small amounts throughout the season, so that it is less likely to be lost before your plants can take it up. Building up soil organic matter and incorporating nitrogen-fixing leguminous cover crops into your crop rotation are also good ways to provide some slow-release nitrogen to your crops.

Before you decide whether to add nutrients to your soil using fertilizers or composts, it is important to know that in Maryland farmers who sell at least \$2,500 worth of crops per year, or who raise a certain amount of livestock, are legally required to have and follow an approved nutrient management plan. The University of Maryland Agricultural Nutrient Management Program can help you comply with this requirement, and plan how to provide your crops the amount of nutrients that they need to grow well.

Farming practices that improve soil health

Above you read about how to test soil fertility and how to improve its pH, organic matter, and nutrient availability. Additional farming practices that can improve soil health include minimizing tillage and incorporating cover crops into your crop rotation. Reducing tillage helps build soil structure and reduce compaction. This is important, because plant roots need both air and water, and when soil has poor structure or is compacted, there is little space in the soil for air and water, and plant roots have difficulty growing. Cover crops increase soil organic matter, help build good soil structure, and feed the many organisms that live in the soil. A healthy soil ecology is important for nutrient supply and for suppression of pests and diseases.

To learn more about soil health, and practices you can adopt to improve your soil, see the *Additional Reading* section below.

Additional reading on soil management and soil health:

- **Soils** Cornell Cooperative Extension Agronomy Fact Sheets, <http://nmsp.cals.cornell.edu/guidelines/factsheets.html>
- **Guide to soil texture by feel**, USDA-NRCS, <https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/edu/>
- **Soil organic matter is an essential component of soils.** UMD Extension factsheet 1045, by Jarrod Miller, <https://go.umd.edu/FS1045>
- **Soil pH affects nutrient availability.** UMD Extension Factsheet 1054, by Jarrod Miller, <https://go.umd.edu/FS1054>
- **Soil pH management and determining liming rates.** UMD Extension Soil Fertility Management Bulletin 5. <https://go.umd.edu/SFM5>
- **Lowering soil pH for horticulture crops.** Purdue Extension HO-241-W, by Michael V. Mickelbart and Kelly M. Stanton. <https://go.umd.edu/PurduesoilpH>
- University of Maryland Extension **Agricultural Nutrient Management Program (UME-ANMP)**: <https://extension.umd.edu/anmp>
- UME-ANMP **Soil Testing recommendations**: <https://extension.umd.edu/learn/2-soil-sampling-and-testing>
- **Precision soil sampling helps target nutrient application.** UMD Extension Factsheet 1046, by Jarrod Miller and Craig Yohn, <https://go.umd.edu/FS1046>
- **Manure as a natural resource: Alternative management opportunities.** UMD Extension Bulletin 420, by Jarrod Miller, <https://go.umd.edu/EB420>

- **Comprehensive assessment of soil health.** Cornell University, by Bianca Moebius-Clune, D. Moebius-Clune, and colleagues. <http://soilhealth.cals.cornell.edu/training-manual/>
- **Soil Health website** of the United States Department of Agriculture--Natural Resources Conservation Service (USDA-NRCS). <https://go.umd.edu/NRCSsoilhealth>
- **Building Soils for Better Crops** by Fred Magdoff and Harold van Es, published by Sustainable Agriculture Research and Education (SARE). <https://go.umd.edu/buildingsoils>
- **Managing Cover Crops Profitably** by Greg Bowman, Craig Cramer, and Christopher Shirley, published by SARE. <https://go.umd.edu/covercropsSARE>

You are here: Web Soil Survey Home

The simple yet powerful way to access and use soil data. **START WSS**

Welcome to Web Soil Survey (WSS)

Web Soil Survey (WSS) provides soil data and information produced by the National Cooperative Soil Survey. It is operated by the USDA Natural Resources Conservation Service (NRCS) and provides access to the largest natural resource information system in the world. NRCS has soil maps and data available online for more than 95 percent of the nation's counties and anticipates having 100 percent in the near future. The site is updated and maintained online as the single authoritative source of soil survey information.

Soil surveys can be used for general farm, local, and wider area planning. Onsite investigation is needed in some cases, such as soil quality assessments and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center at the following link: [USDA Service Center](#) or your NRCS State Soil Scientist at the following link: [NRCS State Soil Scientist](#).

I Want To...

- **Start Web Soil Survey (WSS)**
- **Know Web Soil Survey Requirements**
- **Know Web Soil Survey operation hours**
- **Find what areas of the U.S. have soil data**
- **Find information by topic**
- **Know how to hyperlink from other documents to Web Soil Survey**
- **Know the SSURGO data structure**
- **Use Web Soil Survey on a mobile device**

Announcements/Events

- **Web Soil Survey 3.3 has been released! View new features and**

Overview of Farmland Preservation in Maryland

Margaret Todd, Law Fellow, Agriculture Law Education Initiative

Disclaimer: The following is intended for educational purposes only and is not legal advice.

Introduction

Federal and state programs aimed at the protection and conservation of rural lands have been around for decades. Agricultural preservation programs are popular in Maryland and can be useful tools for new and beginning farmers to consider before and after purchasing property. There are many incentives for farmers to preserve farmland, including but not limited to, tax incentives, securing operational funding, personal conservation goals, and preserving a family legacy. Farmers, however, prior to enrolling in a preservation program, need to have to a full understanding of how farmland preservation will impact future land uses.

Generally, there are three main types of farmland preservation programs in Maryland: easement sale, easement donation, and transferable development rights sale. The general purpose of preservation programs is to set aside large blocks of rural lands for the protection of open-space, natural and scenic resources, and to foster rural industries such as agriculture and forestry by limiting non-agricultural uses on existing rural and agricultural lands.

What is a Conservation Easement?

In this context, an easement refers to restrictions placed upon the land that essentially removes certain rights to develop on the property. An agreement called a “deed of conservation easement” is made, wherein a landowner agrees to conserve several acres of land and in exchange receives cash payments or tax credits. The easement is conveyed to an eligible easement holder, typically the local or state government or a land trust. Deeds of conservation easement are usually recorded in the county land records office. A landowner may sell or otherwise convey land protected with a conservation easement. Since the easement is permanent, however, the restrictions “run with the land,” meaning they apply to the land perpetually regardless of the owner or operator, and therefore apply to all future owners and lessees of the property.

The easement often limits the development of property through conditions on allowable land uses, such as limiting or prohibiting subdivision and commercial land uses. Enhanced conservation practices may also be required, for example creating riparian buffers and creating wetland protections plans. A conservation easement typically does not grant public access to a property, but the easement *holder* does gain a right to access the property to monitor, as well as the authority to enforce, the terms of the easement. The landowner and the easement holder work together to finalize the terms of the easement, which are tailored to fit a landowner's individual situation.

Specific terms may be mandated, depending upon the program or easement holder. Most conservation easements provide a degree of flexibility to adapt to future needs by providing the holder discretion to approve changes under discretionary approval clauses or to issue compatible use authorizations. However, the basic principles of contract interpretation apply to conservation easements and the terms that restrict the use of the land, including restrictions on development, uses, and open space maintenance, can be strictly construed if a conflict arises. For example, if “commercial activities” are prohibited under the easement, a farmer who wants to expand or add a retail component to the farm may need to seek approval from the easement holder first. Careful attention to the terms of a deed of conservation easement, therefore, is necessary to ensure it adequately incorporates considerations for the economic concerns and viability of the farm as a continuing business entity.

Easement Sales

Maryland Agricultural Land Preservation Foundation

The Maryland General Assembly created the Maryland Agricultural Land Preservation Foundation (MALPF) in 1978 with the purpose of acquiring easements to restrict the use of agricultural lands in order to “curb the spread of urban blight and deterioration,” and “protect agricultural land and woodland as open-space land.” MALPF was one of the first state easement purchase land preservation programs in the country and it continues to be one of the most successful. The program is administered by county and State in an equitable partnership.

In general, owners of farmland that meets the minimum size and soil eligibility criteria and is located outside a 10-year water and sewer service area can apply for an easement sale. Counties rank the applications to be considered in a given easement acquisition cycle based on factors like productivity, location, conservation and management plans, and commitment; each county can have its own unique local criteria as well. Two independent fee appraisers are selected to establish a fair market value for each property. The Foundation calculates an agricultural value for the property, which is its agricultural production value. Each county prioritizes its applicants by its own ranking system and forwards its prioritized list to the state which makes the offers to selected applicants. Upon selection and settlement of the sale, the landowner is typically paid through an Installment Payment Plan (IPP) over the course of 10 – 30 years. The Foundation web page provides numerous fact sheets to help applicants navigate the easement acquisition process and answer questions about permitted uses for preservation properties <https://mda.maryland.gov/malpf>.

Rural Legacy Program

Established in 1997, Maryland’s Rural Legacy Program is a state funding program administered through the Maryland Department of Natural Resources (DNR) that encourages local government and private land trust sponsors to partner together in acquiring conservation easements from willing landowners to “preserve large, contiguous tracts of open space that contain valuable agricultural, cultural, forestry or natural resources.” The Rural Legacy

program focuses on land conservation investments that protect the most ecologically valuable properties that directly impact the Chesapeake Bay and local waterway health. Rural Legacy easements typically require the preparation and approval of a Soil Conservation and Water Quality Plan and/or a Forest Stewardship Plan. The program requires applicants to apply for a Rural Legacy Area designation. If an area is approved by the Rural Legacy Board, then property owners within a Rural Legacy Area can apply to sell an easement. The program also allows for property owners to donate a conservation easement or to sell or donate a fee simple interest in the qualifying real property. The application process and Rural Legacy Program Grants Manual are provided on the DNR website.

<http://dnr.maryland.gov/land/Pages/RuralLegacy/home.aspx>

County Easement Programs

Certain counties, such as, Harford, Frederick, Carroll, Howard, Calvert, and Anne Arundel, have county easement purchase programs. Such programs vary widely in structure, but the application requirements and easement restrictions are usually patterned after the state easement program. Contact information for each county's relevant department are provided in the Table 1.

MARBIDCO Next Generation Farmland Acquisition Program

The Maryland Agricultural and Resource-Based Industry Development Corporation (MARBIDCO) is a quasi-public corporation with the mission to “to help Maryland’s farm, forest, and seafood businesses achieve sustainable viability and profitability now and into the future.” Through its Next Generation Farmland Acquisition Program MARBIDCO offers up to 51% of the Fair Market Value (FMV) of the land only (with a cap of \$500,000), on a competitive application basis, to qualified young or beginning farmers who have trouble entering the agricultural profession due to high land costs or inadequate financial capital. Following the land sale transaction, the purchaser is required to sell a permanent easement on a land to a rural land preservation program (thus extinguishing the development rights on the property forever). Once a permanent easement has been subsequently facilitated, the purchaser is obligated to repay MARBIDCO the original Next Gen Program Option Purchase amount, plus a 3% administrative fee. Interested applicants, after identifying a property, should start the process by contacting the county office (Table 1) and determining whether a particular property is not already under a conservation easement and whether it is a potential property for the program.

Easement Donation

Easement donations operate to a large extent in the same manner as easements sales, the largest difference being that the landowner does not receive payment for the lost development value of the property. Instead, the landowner is allowed to claim a charitable deduction for federal income taxes and a credit for state income taxes for the lost value associated with protecting the land. In addition, there is a property tax credit and possible federal estate tax exemptions.

To qualify for the federal deduction under Internal Revenue Code 170(h), a donation has to meet three general requirements. The donation must: (1) be of a qualified property interest (value determined by a qualified appraiser), (2) be made to a qualified easement-holder, and (3) be made exclusively for conservation purposes protected in perpetuity. There are guidelines for what makes appraisers and easements holders “qualified.” County easement programs may not always require a “qualified” appraiser, but landowners intending to claim state and federal tax deductions should comply with the law and regulations governing deductions for contributions of conservation easements. Depending upon the land use type and the landowner's taxable income, this deduction can be claimed across multiple tax years, which is often needed as many landowners lack the income to claim such a large donation in a single year. Maryland income tax credit is in addition to other tax deductions. The deduction is limited to \$5,000 per year and the landowner can carry forward the remaining credit amount up to 15 years for a maximum credit of \$80,000. The DNR has a useful summary page for federal and state tax benefits of conservation easement donations.

For estate-tax purposes, a conservation easement limits the amount of development that can occur, thus lowering the appraised value of the land and reducing the taxable estate. This makes conservation easements effective tools for reducing estate taxes. The Agriculture Law Education Initiative has a guide, *Conservation Easements: A Useful Tool for Farm Transition and Estate Planning* that provides more details on several ways agricultural land preservation can also serve as an estate planning tool. <http://umaglaw.org/publications-library/estate-planning-and-conservation-easements/>

Maryland Environmental Trust

The Maryland Environmental Trust (MET) was created in 1967 to “to conserve, improve, stimulate, and perpetuate the aesthetic, natural, health and welfare, scenic, and cultural qualities of the environment, including, but not limited to land, water, air, wildlife, scenic qualities, [and] open spaces.” MET determines whether preservation of the offered land would confer a significant public benefit in the form of woodland, wetlands, farmland, scenic areas, historic areas, wild and scenic rivers, and undisturbed natural areas. The easement donation process through MET is outlined on their webpage <http://dnr.maryland.gov/met/Pages/default.aspx>.

Local and Private Land Trusts

Local or private land trusts may also take on conservation easements. Often, MET will partner with other organizations whose purpose and goals are similar through cooperative agreements or as an easement co-holder. Collaborative agreements between land trusts helps avoid unnecessary competition and allows the trusts to increase land conservation efforts with expanded funding options and shared expertise. The MET provides a list of local land trusts that operate in Maryland. Scenic Rivers Land Trust, Chesapeake Wildlife Heritage and the Eastern Shore Land Conservancy are examples of private land trusts that can be the recipient of a donated conservation easement. Contacting the county planning or land preservation office is the best way to gather information about local land trust options (see Table 1).

For tax purposes, any private land trust chosen for an easement donation must be “qualified” according to federal and state guidelines. For federal tax deductions, the organization must be either run by the local or state government or a non-profit organization (according to IRC § 501(c)(3)), with the purpose of protecting and enforcing the conservation easement. The land trust generally must have an established monitoring program such as annual property inspections to ensure compliance with the conservation easement terms and to protect the easement in perpetuity. The organization must also have the resources to enforce the restrictions of the conservation easement, which may be in the form of conservationists who inspect the property and prepare monitoring reports. The Maryland state tax credit is only available to perpetual easements conveyed to MET, Maryland DNR or MALPF, and approved by the Board of Public Works.

Green Print Program

In the late 1990’s MDNR began identifying the most ecologically important lands in the State, referred to as Maryland’s Green Infrastructure (GI). Through the Green Print Program the State makes efforts to delineate and protect the most ecologically significant lands in the state using up-to-date mapping techniques and making offers to landowners for targeted acquisitions and easements. There is no application process because the state will identify and make offers for lands it deems eligible. Maryland’s Green Print Map is one resource that displays information about whether or not a property may have a MALPF, MET, or Rural Legacy easement. <https://dnr.maryland.gov/land/Pages/Green-Infrastructure-Mapping.aspx>

Purchase of Development Rights (PDR) & Transferable Development Rights (TDR)

Purchase or Transfer of Development Rights programs are another vehicle for preserving rural land and encouraging development in existing communities. Approximately ten Maryland Counties have programs that allow development rights to be sold or otherwise conveyed to increase the development potential on another property. A key approach to transferable development rights programs is to use private sector investments, rather than public sector funds, to preserve farmland.

Through voluntary TDR programs, developers buy development rights from owners of rural land within a county’s designated “sending areas,” which county governments identify for preservation. A perpetual conservation easement is then placed on the property from which development rights were purchased or transferred. Developers can use their purchased development rights to build more residences, increase commercial square footage or gain other marketable features in “receiving areas,” located in areas where development and infrastructure are planned and desired. For an explanation of the many types of zoning restrictions that could impact of the use of farmland, refer to the chapter on *Understanding Zoning for New Farm Enterprises*. Also, contact your local county planning department to determine whether they have PDR or TDR programs and how to participate.

Conclusion

Agricultural conservation easements have become one of the primary tools for farming communities and farmland preservation advocates to preserve hundreds of thousands of acres of working agricultural lands with numerous entities engaging in this work at the local and state level.

Many resources are available to farmers interested in land preservation. An attorney should be consulted about the need for a title search to help determine if an easement or covenant has been sold or donated for a property before initiating a property purchase. Additionally, consulting an attorney can help farmers fully understand the implications of permanently encumbering the land and can help with negotiating the terms of an easement to ensure the landowner's interests are also protected.

Table 1: Maryland County Land Preservation Program Participation Table

County Contact Information	MALPF	MET	Rural Legacy	Green Print	County Programs	TDR/PDR
Alleghany County 301-777-5955 ext. 210	X	X	X	X		
Anne Arundel County 410-222-7317, ext. 3553 /3046	X	X	X	X	X	
Baltimore County 410-887-3480	X	X	X		X	
Calvert County 410-535-1600 ext. 2336	X	X	X	X	X	X
Caroline County 410-479-8100	X	X	X	X		X
Carroll County 410-386-2214	X	X	X		X	
Cecil County 410-996-5220	X	X			X	X
Charles County 301-645-0692	X	X	X	X		X
Dorchester County 410-228-3234	X	X	X	X		

Frederick County 301-600-1474	X	X	X		X	X
Garrett County 301-334-1923	X	X	X			
Harford County 410-638-3235	X	X	X		X	X
Howard County 410-313-5407	X	X	X	X		X
Kent County 410-778-7475	X	X	X			X
Montgomery County 301-590-2823	X	X	X	X	X	X
Prince George's County 301-574-5162 ext. 3	X	X	X		X	
Queen Anne's County 410-758-1255	X	X	X	X	X	X
Saint Mary's County 240-309-4021	X	X	X			X
Somerset County 410-651-1424	X	X	X	X		X
Talbot County 410-770-8030	X	X	X			
Washington County 240-313-2430	X	X	X	X	X	
Wicomico County 410-548-4860	X	X	X	X	X	X
Worcester County 410-632-1200 ext. 1302	X	X	X	X		

Resources and Web Links - Farm Establishment

- Agricultural Conservation Leasing Guide, <http://umaglaw.org/publications-library/agricultural-conservation-leasing-guide/>
- Agricultural Water Law in Maryland: The Water Appropriation Application Process and Use in a Time of Drought, <http://umaglaw.org/publications-library/agricultural-water-law-in-maryland-the-water-appropriation-application-process-and-use-in-a-time-of-drought/>
- Conservation Easement Audit Techniques Guide published by the IRS, https://www.irs.gov/pub/irs-utl/conservation_easement.pdf
- MARBIDCO Next Gen Program page: https://www.marbidco.org/pages/programs_land_preservation/rural_land_preservation_programs_nextgen_ngfap.htm
- MD FARMLink <http://www.marylandfarmlink.com/>
- Maryland Land Preservation Fact Sheet, <https://mda.maryland.gov/malpf/Pages/Fact-Sheets.aspx>
- Maryland Land Trust Directory, Maryland Environmental Trust, <http://dnr.maryland.gov/met/Documents/2018-MD-LT-Directory.pdf>
- Maryland's Rural Legacy Program, Maryland Dep't of Nat. Res., <http://dnr.maryland.gov/land/Pages/RuralLegacy/home.aspx>
- Maryland Transfer of Development Rights Best Practices, Maryland Dept of Planning, <https://planning.maryland.gov/Documents/OurWork/envr-planning/TDR-programs-fact-sheet.pdf>
- Soil Web, UC Davis <https://casoilresource.lawr.ucdavis.edu/gmap/>
- Tax Benefits of Conservation Easement Donations, DNR, http://dnr.maryland.gov/met/pages/tax_benefits.aspx

Farm Establishment Review - Questions to Ask Yourself

1. Have you identified a piece of property to farm that will meet your needs (production, acreage, affordability and location)?
2. Have you contacted local agriculture agencies for more information and any questions (Cooperative Extension, Soil Conservation, USDA Farm Service Agency)?
3. What are the zoning and restrictions on your property?
4. Have you researched the property deed, covenants and easements?
5. Have you explored your soil type through web soil survey, in person and gotten a soil test?





Enterprise Selection

Formulate a Farm Strategy

Ben Beale, Extension Educator, University of Maryland Extension-St. Mary's County
Shannon Dill, Extension Educator, University of Maryland Extension-Talbot County
Neith Little, Extension Educator, University of Maryland Extension-Urban Agriculture

Setting goals and developing an overall farm strategy will be a way to focus ideas, conduct market research and create an overall plan.

Goal Setting

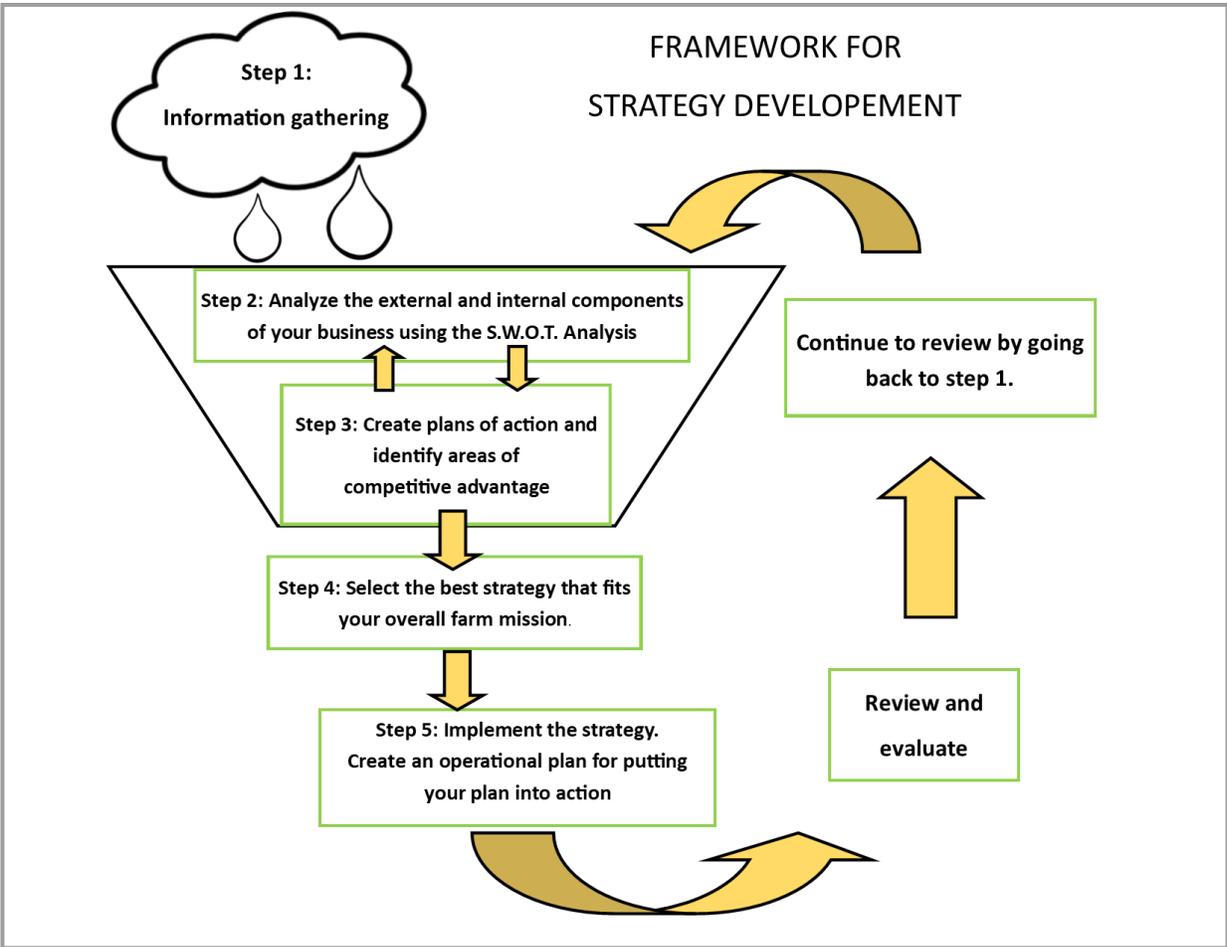
Prior to formulating a farm strategy it is helpful to think about the overall goals of the farm from a personal and business perspective. What are the reasons why you want to farm and what are your business expectations? Having these goals in mind will be important as you go through the steps of developing a farm strategy.

-
1. I want to farm because:
 2. I have the following personal and family goals:
 - 1.
 - 2.
 - 3.
 3. I have the following farm goals:
 - 1.
 - 2.
 - 3.
 4. My timeline to collect resources and start the farm operation is:

With your goals in mind, now it is time to develop a farm strategy that will help you reach those goals. This Guidebook outlines 5 steps to developing a farm strategy.

Developing a farm strategy is a series of steps:

1. Gathering information and market research.
2. Analyzing the external and internal components of your business using the S.W.O.T. analysis.
3. Creating plans of action and identifying areas of competitive advantage.
4. Selecting the best plan that fits your overall farm mission.
5. Implementing and evaluating the strategy.



Step 1: Information gathering and market research

This step considers what, why, and how the customer wants a product or service.

Market Research: Research current and potential markets to identify trends, competitors, needs, and buyers. Be sure to take time to collect data. Obtaining good data serves as the foundation for the creation of an effective strategy. The better the information, the better your strategic plan will be. For example, if you are considering raising pastured pork, you will need to research whether pastured pork is currently available in your area, how much it sells for currently, how many potential customers eat pork, how much they value pastured pork over other pork options, etc.

Never rely only on your opinion of what the market wants. There are a number of tools that you should consider using for your research:

Networking: A one-on-one interview can be helpful for generating ideas. Interview other business owners or operators who may be able to provide good information on what has or has not worked for them. Talk with similar farms and producers. Attend tradeshow,

conferences, and business functions to meet other entrepreneurs, talk, and network about market trends. Sales representatives are also good sources of information.

Demographics: Information about the consumer in your area can be very helpful in marketing to them. The U.S. Census is a great place to find this information.

Observation: Simply taking time to observe can be a powerful tool. What are people buying? What are competitors offering?

Surveys: Surveys can be written or oral. A written survey can be distributed to a wide range of the population. Consider using an incentive to increase survey response rate, such as free products or coupons.

Focus Groups: A small group of potential consumers who are asked specific questions about the product/service.

Step 2: S.W.O.T. analysis

The S.W.O.T. analysis is an analytical tool used to collect information and guide the decision making process in order to obtain strategic advantages.

Strengths and Weaknesses -Evaluation of the Internal Environment

The strengths and weaknesses section is internal to the organization and provides insight into what components are available to provide for competitive advantages. Filling out this section allows the organization to identify the resources available and acknowledge the gaps that will need to be filled.

Examples include: operations, equipment, facilities, knowledge, finances, technology, and experience.

Opportunities and Threats—Evaluation of the External Environment

This part of the S.W.O.T. analysis focuses upon the external opportunities and threats that exist. The analysis allows the organization to identify strategies that take advantage of opportunities for growth while avoiding potential threats.

Opportunities and threats are external to the organization and thus cannot be changed by the organization. Rather the organization must change with and react to the changing external factors.

Examples of opportunities and threats include new markets, expanding markets, government regulations or incentives, new technology, increasing competition, lower or higher barriers to entry, or economic conditions.

S.W.O.T. Analysis

List your Strengths and resources <i>(internal to your farm and team)</i>	List your Weaknesses <i>(internal to your farm and team)</i>
List your Opportunities <i>(external to your farm and team)</i>	List your Threats <i>(external to your farm and team)</i>

Step 3: Creating plans of action and identifying areas of competitive advantage

As you think through the strategic planning process, do not try to come up with the ultimate best strategy for your operation right from the start. You will need to consider all of the possible strategies you could employ based on the findings from the information discovery and S.W.O.T. analysis. Compare and contrast the competitive advantages each strategy may offer and select the best after you review all of the areas of competitive advantage. This should be an ongoing, creative process. If you find this phase difficult, break apart the process and start with information discovery first, followed by focusing on the marketing strategy phase

Things to think about when developing a plan of action:

Businesses will create competitive strategies to set themselves apart from others in the market. Types of competitive strategies can include least-cost and differentiation.

- Least-cost strategy focuses primarily on the price or cost of the product. Being the least expensive in the market gains the product competitive advantage. This strategy is known for cutting input costs and often the product is a “no frills” product. This type of strategy is

normally focused on efficiency of operations. Most commodity-based industries such as the grain industry utilize a best or least-cost strategy. Generally small farms lack economies of scale and will not want to compete in a commodity market based solely on price. Instead, you will want to compete based on some unique or differing attribute that offers the customer perceived value.

- A differentiation strategy distinguishes the differences of a product to make it more desirable to a specific market. The strategy focuses on goods and services needed to satisfy the customer where the value outweighs the increased cost. A differentiation strategy also sets your product apart from the competition, creating a competitive advantage by offering a unique or different product or service that other companies either cannot or will not offer.

The questions below will provide some tips for outlining a differentiation strategy including your product, attributes, and pricing:

- What is unique or different about your farm business (products and/or services)? Unique attributes may include: production methods, packaging, location, availability, etc.
- What is the competitive advantage garnered from your strategy?
- The product/service attributes should be unique enough that other competitors cannot easily copy it, but adequate enough to capture a sustainable market share.

Step 4: Selecting the best plan that fits your overall farm mission

It is now time to review the previous steps 1-3 and select the plan that best fits your overall farm business. Keep in mind your business's strengths and weaknesses as well as external opportunities and threats. Once all of the possibilities have been laid out and the best strategy chosen, be sure it fits with your farm mission and objectives. Can you see yourself doing this in 5-10 years?

The overall strategy is derived from component strategies including marketing strategy, production/operational strategy, financial strategy, and management strategy. Be sure to include the main components of marketing, production, finances, management, and your key competitive advantage points.

Step 5: Implementing and evaluating the strategy

You have done your homework, conducted market research, and developed areas of competitive advantage. The implementation plan will contain a timeline for the steps needed to meet business objectives. Consider the implementation plan your ultimate "To-Do List". The timeline will cover the production, financial, management and marketing goals outlined in the business plan. As you develop an implementation plan, you may begin to notice areas where the best-made plans are not practical. Taking time to go through this process will help you identify bottlenecks and avoid pitfalls. Be sure to continue to evaluate your farm strategy as goals, markets and other situations change.

Organic Production and Certification

Ben Beale, Extension Educator, University of Maryland Extension-St. Mary's County
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Organic produce has become very popular in the last 10 years. Growing vegetables organically requires physical input and critical thinking when approaching pest and fertility management. Organic production is a 'system' approach. Crop nutrients and soil fertility are managed through rotations, use of cover crops, and application of plant and animal materials. Pests are managed through the increase in biodiversity of the system, encouraging natural enemies, and the use of products that are approved by the National Organic Program (USDA). Weeds are managed through the use of mulches, tillage, and hand labor. Few chemical weed suppression products are effective.

Organic production methods

Soil productivity and health are the cornerstones to healthy plants that can withstand attacks from pests and diseases. Soil organic matter, which can be enhanced through the use of cover crops, composts and natural mulches, can serve as a reservoir of plant nutrients, enhance soil biological diversity and improve soil tilth, structure, and water holding capacity. The proper use of crop rotation in an organic system allows cover crops to be utilized in the most effective manner by breaking the disease cycle, increasing soil organic matter, increasing biodiversity, encouraging beneficial insect populations, and providing a nitrogen source to the crops that will be grown.

Soil testing is necessary to determine crop needs. Soil tests will indicate recommended rates of phosphorus and potassium required for crop production (University of Maryland Extension Publication EB-236). Organic producers can provide nutrients to their crops through the use of composted manures, cover crops, and approved blended materials. Blended fertilizers must be approved by the NOP (National Organic Program).

Organic growers are required to improve the biological productivity of their soil, and one way they achieve this is through the use of cover crops. These cover crops, while providing organic matter and erosion control, can also provide nutrients, many in the source of nitrogen. It is difficult to determine the actual quantity of nitrogen each cover crop can provide to the subsequent cash crop, as growth rate and biomass will be variable at maturity.

To control weeds vegetables are often grown on black plastic with trickle tape that will supply the plant's water needs. Organic growers often use other mulches that are readily available (straw, newspaper, or planting directly into a killed cover crop). In all organic production systems, weeds must be controlled because they are the number one cause of yield loss, as well as the most difficult pest to manage. Supplemental weed management is obtained

through the use of cover crops, tillage, flaming, and manual removal. The manual control of weeds in an organic system is one of the factors that increase the cost of raising vegetables organically. Seasonal labor sources must be secured in order to maintain the productivity of the crop.

Insects are managed through enhancement of biodiversity (increasing natural enemy populations, providing habitat, elimination of non-selective chemical controls), crop rotation, adjusting planting dates, and the use of approved chemical products.

Pricing and Marketing Organic Products

For many traditional agricultural products, profit margins can be minimal. But, organic certification offers a premium that consumers may be willing to pay for the organic label. (The premium includes the cost of products grown organically above the cost of conventionally grown products, as well as increasing demand for organic products.) Organic production is more labor intensive and prices should reflect that cost. Pricing directly affects profit margins and will depend upon the market outlet, market position, target consumer, cost of production, and local prices.

Common sales channels for organic products include direct marketing. Direct marketing refers to sales of a good or service from the producer directly to the consumer, through market outlets such as farmers' markets, roadside stands, and CSAs. This eliminates wholesale marketing and the middleman and sells directly to the consumer. There is an increasing organic wholesale market to health stores and supermarkets due to consumer demand. Selling to these larger markets often takes higher quantity of production, and may pay lower prices than can be achieved in direct market outlets. Organic wholesale markets are still somewhat immature, but are growing. According to the Organic Trade Association, organic products are available in 73 percent of conventional United States grocery stores and consumers continue to demand more.

Identifying your **target customer** is an important step in developing a marketing plan. There are consumer segments that demand, search for, and purchase organic products. This is generally a health conscious consumer who wants to buy fresh and local products. This may be a consumer with more disposable income who is willing to pay more for organic products.

The Organic Certification Process

USDA Organic is a national certification for farmers who use organic practices: <https://www.usda.gov/topics/organic>. To use the USDA Organic label, a grower must become Certified Organic, and maintain that certification from year to year. Farms and other businesses who have an organic certification are listed in a public USDA database: <https://organic.ams.usda.gov/integrity>

An exemption to the certification requirement is available for very small-scale growers who have less than \$5,000 in organic sales annually and follow organic practices as defined by the USDA's National Organic Program Rules. Exempt producers are allowed to describe their

products as organic, but are not allowed to use the USDA Organic label. The Maryland Department of Agriculture offers a registration program that allows exempt organic producers to be listed in state and federal organic directories.

To become Certified Organic, a farmer will need to understand the National Organic Program rules, develop a plan for how they will follow those rules, and submit an application to a third-party certifier who will review the plan and inspect the farm. This process may take three years, if the land being certified has previously been used for conventional agricultural production. A variety of third-party certifiers exist, including the Maryland Department of Agriculture: https://mda.maryland.gov/foodfeedquality/Pages/how_get_certified.aspx.

A more detailed description of the organic certification process is available in the Maryland Organic Production Manual: <https://extension.umd.edu/mdvegetables/organic-vegetable-production/organic-vegetable-production-manual>

Other related certifications

Several other certifications of farming practices exist focused on sustainability and humane treatment of livestock. Certified Naturally Grown is a grower-run program where farmers review each other's production practices. "Certified Humane" and "Animal Welfare Approved" are two third-party certifications of livestock production practices.

Additional resources

If you want to use organic practices and are interested in marketing what you produce as organic, you will need to begin learning more and planning your organic farming practices and record-keeping system. The following resources will help you start on this journey.

<https://www.usda.gov/topics/organic>



Understanding Farm Equipment Needs

Ben Beale, Extension Educator, University of Maryland Extension-St. Mary's County

Every farm operation relies upon tools to help get the job done-some enterprises are able to remain competitive with a minimal investment in equipment, while others require substantial investment. Equipment, along with land, is typically a major cost driver for farm operations. It is thus important to critically evaluate the need for each piece of equipment before buying. Visiting similar farm operations to see equipment working, talking with you farm equipment sales representative about equipment options, attending trade-shows and farm demonstrations are all a good way to learn which equipment might be best suited to your farm. A visit to your local Extension office or Soil Conservation District is also a good place to start to learn what others in the region are using and local sources for equipment.

Frequently asked questions regarding farm equipment:

What are the best sources for farm equipment? Farm equipment is most often purchased from local dealers, farm auctions, directly from other farmers, and through internet listings. A good source of information on equipment availability in Maryland is the Delmarva Farmer Newspaper Classified section, or the Lancaster Farming Newspaper Classified section.

Can I rent or lease equipment to get started? Yes-many counties or regions offer farm equipment for rent on a daily or per acre basis. Commonly available equipment includes no-till drills and conservation planters. The Southern Maryland Agricultural Development Commission has compiled a listing of equipment available for rent is available here: <http://smadc.com/farmRESOR/equiprental.htm>

What is a custom farm operator and how do I use them? Many farm tasks can be completed by custom operators. In other words, hiring another firm to complete certain tasks, such as spreading lime, hauling goods, planting grain, fumigation or harvesting grain, to name a few. University of Maryland has developed a Custom Equipment Average Work Charges factsheet available at: <https://extension.umd.edu/grainmarketing/custom-rates-0>. The factsheet will give you an average per acre charge for a particular farm task. The availability of custom operators varies greatly from county to county. Ask a fellow farmer or farm agency for help in identifying custom farm operators. Also be aware that custom operators may decline or charge more for small acreage jobs.

What kind of equipment do I need for my farm? Equipment needs vary tremendously between enterprises. A listing of different enterprises with an accompanying chart of commonly utilized equipment with prices is available here:

Avoiding the top 5 common equipment pitfalls:

1. **Buying equipment that the farm will never be able to pay for.** Modern farm equipment is expensive. New farmers often make the mistake of purchasing more equipment than they need for the size operation they have. For example, a modern grain operation will incur equipment of costs $\frac{3}{4}$ of a million dollars. This large cost typically requires that the investment be spread among many acres (1,200-1,500) to be economically feasible. Knowing your economy of scale and sizing the equipment to fit that scale is a critical first step. This is true whether you are farming 3 acres or 5,000.
2. **Buying equipment the farm doesn't need.** This one is pretty self-explanatory. It can be tempting to buy that shiny tractor at a farm auction when you don't have a real need. Do your homework first, and remember that the bill still comes due whether you use the equipment or not.
3. **Improperly sizing equipment for the job at hand.** Be sure the power source, implement, and the task at hand are compatible with each other. In other words, don't hook a 6 bottom plow to a 40 horsepower tractor to till a $\frac{1}{4}$ acre vegetable plot.
4. **Buying all new equipment.** Both new and used equipment has a fit. Used equipment can lower initial fixed costs, and allows a beginning farmer with a lower economy of scale to justify an equipment purchase. Used equipment does require the operator to have some mechanical aptitude.
5. **Buying equipment and never learning how to use it properly.** Take time to read the operator's manual, listen to others and request a set-up demo from the seller to learn how to properly operate a piece of equipment.

Cost of Equipment

When developing a cost analysis for a new enterprise of farm, consider the true cost of the equipment. These costs are often referred to as the DIRT-5:

1. Depreciation
2. Interest
3. Repairs
4. Taxes
5. Insurance

The initial price of a piece of equipment will provide you with an estimated impact to cash flow-when and how much the monthly payment will be for example. However, a more accurate picture of the true cost of the equipment can be obtained by spreading the cost out over the useful life of equipment. For example, a tractor may have an initial cost of \$30,000. If the tractor has a useful life of 10 years and a resale value after 10 years of use of \$10,000, then the true depreciation cost would be \$2,000 per year. Add in interest, repairs, taxes, and insurance, and the true cost will more likely be \$3,000 to \$4,000 per year, plus operating expenses (fuel, oil, maintenance) of around \$10 per operating hour.

Grain Farm

Grain Farm Assumptions: The following equipment is based upon a 1,500-2,000 acre operation with limited storage. Equipment cost estimates are based on new or near new condition equipment. The sample operation follows a standard rotation of small grain (wheat/barley), full season soybeans, corn and double crop soybeans or sorghum. Most field operations are completed no-till or reduced till, which minimizes the amount of tillage required. Some custom work is utilized for hauling grain to the elevator, fertilizer application and some field spraying.

Field Equipment	Description	Average costs for new or near new condition
Tractor Over 150HP	Cab, 4wd, GPS,	\$110,000.00
Tractor Under 150HP	Cab, 4wd, GPS	\$75,000.00
Tractor, Utility, 50-75	Open Platform, 2wd, utility	\$35,000.00
Combine	Mid-large capacity	\$250,000.00
Pick Up Truck	¾ ton	\$40,000.00
Disc	20 ft. used	\$18,000.00
Chisel Plow	12 ft. used	\$15,000.00
Cultivator, field	20 ft. used	\$12,000.00
Grain Drill	15 ft., no-till equipped	\$50,000.00
Planter (corn/bean)	8 row, no-till equipped	\$70,000.00
Combine Corn Head	6 row	\$42,000.00
Combine Grain Head	18-25 ft. platform	\$35,000.00
Sprayer-boom type	60-90 ft. boom. Pull Type	\$45,000.00
Mower	10 ft., Heavy Duty	\$5,000.00
<u>Transportation/Storage</u>		
Grain Wagon	600-800 bushel	\$12,000.00
Grain Truck	Straight Truck, Single Axle	\$25,000.00
<u>Buildings</u>		
Pole Building	Equipment storage	\$25,000.00
Total		\$767,000.00

Hay Operation

Cash Hay Assumptions: are based on small square bales, utilizing a pull type stack wagon for up to 200 acres. For smaller operations, eliminate stack wagon and increase hay wagons. Smaller operations (1-75 acres) may also consider eliminating one tractor, drill and boom sprayer. Equipment cost estimates based on new or near new condition.

Field Equipment	Description	Average new or near new condition
Tractor 60-80HP	2 or 4wd, Diesel, Cab	\$38,000.00
Tractor 40-50HP	2 wd, diesel, no cab	\$30,000.00
Mower Conditioner	Disc type, 10-12 ft. model	\$18,000.00
Rake	Wheel type, 12-15 ft. model	\$8,000.00
Tedder	9-12 ft.	\$6,500.00

Baler; Small Square	Mid-size, 540 PTO, Preservative Applicator	\$23,000.00
Hay Drill(used)	No-till, 10 ft.	\$8,000.00
Stack Wagon	Pull-type	\$35,000.00
Boom Sprayer, 3-500 gal.	45-60 ft. boom	\$10,000.00
<u>Transportation/Storage</u>		
Pick Up (used)	¾ Ton	\$20,000.00
2 Hay Wagons		\$10,000.00
<u>Buildings</u>		
2 Pole Buildings	High clearance for stack wagon	\$40,000.00
Total		\$246,500.00

Example of Typical Equipment Required and Cost for a Small 5-15 Acre Vegetable Farm

Field Equipment	Description	Average Used Cost	Average New Cost
Tractor -general	55 hp, diesel	\$12,000.00	\$30,000.00
Disc Harrow	9 foot- transport	\$1,800.00	\$3,600.00
Field Cultivator	Perfecta II-8 ft.	\$3,000.00	\$4,000.00
Cultipacker	8 ft, non-transport	\$500.00	\$1,200.00
Rotary Mower	5 ft.	\$500.00	\$1,000.00
Tractor-Cultivator	Farmall C, 30HP, 2 row. New model is 30 hp modern cultivating.	\$4,000.00	\$22,000.00
Attachment Sweeps	1 set sweeps, 1 set finger discs,	\$1,000.00	\$1,200.00
Vegetable Transplanter	Mechanical , 1 row, with water attachment	\$1,500.00	\$2,000.00
2 row precision direct seeder	Monosem, vacuum, addl. plates	\$4,000.00	\$6,500.00
8 ft drill	Conventional, 7 inch row spacing	\$2,000.00	\$8,000.00
Raised Bed Mulch Layer	4 ft, drip attachment, 8-10 inch bed	\$2,000.00	\$4,200.00
Water wheel transplanter	1 row, 3 pt hitch, water attachment	\$1,100.00	\$1,600.00
Wagon	4-wheel, 18 ft	\$2,000.00	\$2,600.00
Wagon	4-wheel, 18ft	\$2,000.00	\$2,600.00
100 Harvestings lugs	Plastic, perforated with handles	\$300.00	\$500.00
Packing Line	16 inch, 4 unit packing line with rotary packing table	\$2,000.00	\$3,000.00
Total		\$39,700.00	\$94,000.00

Food Safety Overview

Shauna Henley, Extension Educator, University of Maryland Extension-Northern Cluster

Food safety is no longer what you learned from your family elders, but rather an emerging expectation from your future buyers - safe, nutritious, and unadulterated foods. As a beginning farmer, food safety must be part of your farm's fabrication, while you grow and evolve the food safety culture of your operation. Staying up-to-date on the regulations and the science is your responsibility. The following will provide a broad introduction of the regulations, certifications, and resources in Maryland for food safety on your farm.

Quick overview of the Regulation Hierarchy:

It is important to have a basic understanding of the organization of regulatory agencies and jurisdictions around the food system. At the



top are federal level agencies created by Congress to regulate and enforce federal laws. The USDA (1862), FDA (1906), and EPA (1970), and each play a role in regulating some part of the food supply chain (e.g. organic certification, interstate commerce, microbial standards, waste water disposal). Underneath the federal agencies are state jurisdictions, that are regulated in Maryland by the Maryland Department of Agriculture (MDA), Maryland Department of Health (MDH), and Maryland Department of the Environment (MDE). Underneath the state departments are local county government's Environmental Health Services (EHS) department.

Typically at the federal level, it is expected that scientifically-based minimal standards for food safety are met, while state and county governments can choose to make more stringent regulations than what was federally introduced.

Certifications for Produce

Good Agricultural Practices & Good Handling Practices (GAP/GHP)

GAP/GHP was established in 1999, and is a voluntary audit for those growing produce (fruits and vegetables) and either pack, handle (post-harvest), and/or store produce. While it is voluntary, many buyers will require GAP certification from growers they purchase produce from. The goal of the audit is to help producers reduce and/or eliminate microbial contamination risks to prevent consumers from eating contaminated fresh produce. Growers should know whether or not buyers expect their farm operation to be GAP certified, as part of the buyer's food safety protocol.

The areas of focus to prevent microbial contamination during a GAP/GHP training are:

- Worker health and hygiene
- Water quality and safety
- Soil amendments - manure and compost use
- Animals - Domestic, wild, and livestock

GAP/GHP in Maryland

The Maryland Department of Agriculture (MDA), Food Quality Assurance Program, in collaboration with the University of Maryland host grower GAP/GHP training statewide for a nominal fee. Participants who complete the training will receive a certificate of completion, however, an operation will still require a food safety plan and an audit to be in full compliance.

The MDA Food Quality Assurance Program will perform the GAP/GHP audits. A grower will need to request an audit, and know the audit inspection questions in advance. There are other types of GAP/GHP are available, including: Mushroom GAP, Group GAP, Harmonized GAP and Aquaponics GAP (Pilot).

Food Safety Modernization Act (FSMA): Produce Safety Rule (PSR)

The Produce Safety Rule is a federally regulated standard for production, harvest, handling, packing, and holding of fruits and vegetables for human consumption. Unlike the voluntary nature of a GAP/GHP audit, the FSMA Produce Safety Rule establishes a mandatory legal obligation, for the farms subject to the rule, to follow certain food safety requirements.

According to the Produce Safety Rule, it is required that “at least one supervisor or responsible party for your farm must have successfully completed food safety training at least equivalent to that received under standardized curriculum recognized as adequate by the Food and Drug Administration.” The curricula typically used is from the Produce Safety Alliance <https://producesafetyalliance.cornell.edu/>.

Who Must Comply with FSMA Produce Safety Rule?

Farming operations may be considered Covered (must comply with the PSR), Qualified Exempt (modified compliance), or Exempt (from the rule and complying). Farming operations that must comply with the Produce Safety Rule will vary, based on farm activities (which crops are grown and where they are sent) and revenue. Farming operations that grow certain commodities that are NOT covered by the rule are Exempt from complying with the Produce Safety Rule. Operations that grow commodities that are covered by the PSR must calculate their 3-year average annual produce sales, with inflation adjustments, to determine if they are Covered or Qualified Exempt. For more on compliance visit the FDA website at: <https://www.fda.gov/food/food-safety-modernization-act-fsma/fsma-final-rule-produce-safety>

FSMA In Maryland

The Maryland Department of Agriculture (MDA), Food Quality Assurance Program, in collaboration with the University of Maryland host grower training statewide for a nominal fee. An all-day grower training will cover seven PSA curriculum modules. Participants who complete the training will receive a certificate of completion, however, an operation will need to implement various recordkeeping tasks to be in compliance. Due to the increased foodborne risk from consuming sprouts, special considerations have been made for farm operations that grow sprouts.

On Farm Readiness Review (OFRR)

As part of the FSMA Produce Safety Rule, farms may undergo a mock inspection. In order to prepare farm operations for an inspection, the National Association of State Departments of Agriculture Research Foundation (NASDA) is providing a confidential and free inspection, so farm operations are prepared for what a real inspection may look and feel like.

Livestock

If you are thinking of keeping animals for agricultural purposes, work with your local UME Agricultural Educator and MDA to ensure animal welfare best practices, and reduce any foodborne risks on your operation. Animals are known carriers of foodborne pathogens, and having a farm with mixed agriculture (produce and animals) will require more thought. Understand the various animal health programs through MDA, and other responsibilities that could relate to tagging, diseases, biosecurity, registration, etc.

<https://mda.maryland.gov/AnimalHealth/Pages/default.aspx>

Food Processing:

Starting a food business will require a strong understanding of local, state, and possibly federal regulations. The foods you process and where the food is processed will play an important role in what food safety laws your business will need to follow. Information on the Maryland Rural Enterprise Development Center <https://extension.umd.edu/mredc/specialty-modules/food-processing>, as well as your county's small business development are a wealth of knowledge on this topic. Become knowledgeable about the Maryland Department of Health's Office of Food Protection <https://phpa.health.maryland.gov/OEHFP/OFPCHS/Pages/Home.aspx>. Find information about how to meet state requirements for food processing, Cottage Foods, packaging, processing, and licensing your food product requires to meet state requirements https://mda.maryland.gov/foodfeedquality/Pages/food_feed_quality.aspx.



Resources and Web Links –Enterprise Selection

Organic Certification Links

- Maryland Organic Production Manual - <https://extension.umd.edu/mdvegetables/organic-vegetable-production/organic-vegetable-production-manual>
- UMD Commercial Vegetable Recommendations <https://extension.umd.edu/mdvegetables>
- Maryland Organic Foods and Farming Association - <http://www.marylandorganic.org/>
- ATTRA – National Sustainable Agriculture Information Service – Organic Farming - <http://attra.ncat.org/organic.html>
- USDA / AMS National Organic Program - <http://www.ams.usda.gov/nop/indexIE.htm>
- SARE – Transitioning to Organic Production - <https://www.sare.org/Learning-Center/Bulletins/Transitioning-to-Organic-Production>
- USDA Alternative Farming Systems Information Center: Organic Production - <https://www.nal.usda.gov/afsic/organic-production>

Handy Equipment Links

- Equipment Basics for a Small Farm - <https://extension.umd.edu/sites/extension.umd.edu/files/docs/programs/mdvegetables/Chap10-Veg-Equip-Irrigation-Essentials-web-version.pdf>
- University of Vermont video on “Vegetable Farmers and their Weed-Control Machines” <http://www.uvm.edu/vtvegandberry/Videos/weedvideo.htm>
- University of Vermont video on “Farmers and their Innovative Cover Cropping Techniques” <http://www.uvm.edu/vtvegandberry/Videos/covercropvideo.html>
- University of Vermont video on “Vegetable Farmers and their Sustainable Tillage Practices” <http://www.uvm.edu/vtvegandberry/Videos/tillagevideo.html>
- Delmarva Farmer newspaper classified section- <http://www.americanfarm.com/classifieds>
- Lancaster Farming newspaper classified section- <http://www.lancasterfarming.com/classifieds/>
- Vegetable Farming Equipment-<https://extension.umd.edu/mredc/specialty-modules/vegetable-equipment-and-irrigat>

Food Safety Links

- Extension Food Safety Page - <https://extension.umd.edu/foodsafety>
- https://mda.maryland.gov/foodfeedquality/Pages/food_quality_assurance.aspx
- <https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfCFR/CFRSearch.cfm?CFRPart=112>
- Video <https://extension.psu.edu/fsma>
- <https://www.ams.usda.gov/services/auditing/gap-ghp>
- Training-online - <https://gaps.cornell.edu/gaps-online-course/>
- <https://www.fda.gov/Food/GuidanceRegulation/FSMA/default.htm>
- <https://mda.maryland.gov/foodfeedquality/Documents/Who%20What%20and%20When%20FSMA%20Brochure%20Final.pdf>
- <https://www.fda.gov/downloads/Food/GuidanceRegulation/FSMA/UCM472499.pdf>

Enterprise Selection Review - Questions to Ask Yourself

1. Did you conduct a SWOT analysis of your enterprise selection? What are your internal strengths and weaknesses and external opportunities and threats?
2. Have you defined your farm strategy and what is your competitive advantage?
3. What type of farm equipment will your enterprise need? Estimated costs?
4. Have you considered organic certification and understand the differences in growing and record keeping?
5. Have you reviewed the food safety regulations and understand your responsibilities?





Business Planning

Farm Business Planning

Shannon Dill, Extension Educator, University of Maryland Extension-Talbot County

Planning is essential to any business, no matter how large or small its inventory, payroll, and bank account. To be successful, farm operators must know their current position and future plans. Thinking about your plans is not enough! Taking time to formulate ideas, evaluate your business, devise a strategy, and anticipate possible problems will help your business be successful. Write it down.

Parts of a Business Plan

- Executive Summary - a one page summary of the business including pieces of each section below. It goes first in the plan but should be written when all of the other parts are complete.
- Mission and Goals - a clear mission to why the business exists and a listing of short term and long term goals of the business.
- Background Information - a summary of your history and farm history and how the business was created.
- Farm Strategy - this is a process to make decisions on what your enterprise is and how you will reach your customer.
- Marketing Strategy and Plan - the marketing plan will detail your product mix and how you will get that product in the hands of the consumer.
- Enterprise Budgeting - this is a listing of the expected income and expenses per enterprise.
- Financial Plan - provides a detailed listing of the balance sheet (assets and liabilities), cash flow (income and expenses) and income statement (income, depreciation, inventory and expenses).
- Management Plan - includes details of how the work will get done and responsibilities within the business.
- Implementation Strategy - creates a plan on how the business will start and operate.
- Exit Strategy - this is a strategy that can be used if the business is not performing as expected.
- Resource Inventory - a detailed listing for equipment and resources used by the farm.
- Appendix - a place to attach contracts, lease agreements and other documents that may support the business plan.

For details and examples on writing a business plan check out the Farm Business Plan Workbook and Case Studies <https://extension.umd.edu//mredc/business-modules/farm-business-planning-workbook>.

Financial Planning Considerations for Beginning Farmers

Shannon Dill, Extension Educator, University of Maryland Extension-Talbot County

Setting Financial Goals

When considering all of the expenses related to agriculture and farming the first step is to consider what your farm financial goals are. Are you planning to farm part time or full time? Will it supplement the family income or will it be the main source of income? By creating financial goals beginning farms can plan for the future and income can contribute to the household, farm and debt expenses.

A good place to start is to create a household budget. What income and expenses do you have on a monthly and yearly basis? A household budget can help when making enterprise decisions and estimating how much income and farm production will be necessary. Think about your personal financial goals. These could include paying for education, saving for retirement, making purchases, travel expenses etc. If you plan to supplement income with a farming enterprise you will need to pay for the farm expenses and make a profit. Having a clear picture of what amount of money the family needs to pay bills and meet debt requirements will help with the success of the farm business and your overall profitability.

Creating a Balance Sheet

A balance sheet can be completed right away. It is completed on a specific date and lists business and personal assets and liabilities. This financial statement is often requested by lenders and is used to measure your net worth using a listing of assets and liabilities.

An asset is anything owned by the business. This can be cash, equipment, land, stocks, accounts receivable, livestock and inventory. A liability is what is owed by the business. This can be credit debt, accounts payable and loans. Most often both categories are divided into current, short term and long term. Current is one year or less and includes items that can easily be converted to cash. Short term are items like equipment that have a shorter loan term and usable life. The last is long term which are items like land that take some time to convert into cash and have longer debt terms.

When all assets and liabilities have been listed the net worth can then be calculated by subtracting the liabilities from the assets. Your net worth will be used by banks to make decisions on how much money they can safely lend you. It is a good practice to do a balance sheet each year on the same date so you can compare and see changes over time.



Enterprise Budgeting

Enterprise budgeting is another financial document that is helpful to farm financial planning. Enterprise budgets outline and estimate the income and expenses related to a particular enterprise. Budgets are created on a unit basis such as per acre, pound, square foot, bushel, or per animal. Using the best estimates possible for yield, price, variable costs and fixed costs a farmer can predict profits. This is very helpful when starting a farm or new enterprise.

For the income section the estimated yield and price will calculate possible income for the enterprise. Expenses are divided into two categories: variable costs and fixed costs. The variable costs vary with the level of output. More acres of crop or head of livestock the higher the variable costs. They will help you to estimate the amount of seed, fertilizer, pesticides, planting or harvesting supplies, fuel and labor associated with the crop. These will be important because a farm will want to at least make enough income to cover the expense of variable costs. Fixed costs are the overhead or farm expenses that will need to be paid regardless of the enterprise. Examples include insurance, interest, taxes and equipment. Once the estimates are made for income and expenses a farm can estimate the profit per unit selected.



Cash Flow Planning

Cash flow is often considered the checkbook of the business and monitors the inflows and outflows of cash in the farm. Seasonality and risk are major reasons why cash flow should be a major consideration since debt and production expenses will be necessary. The cash flow statement is a great way to organize income and expenses and to ensure that funds will be available to pay expenses when they come due. Cash flow planning can be done monthly, quarterly or annually. Income will list all income sources which includes crop sales, payments, off-farm income and capital sales. Expenses included all production and operating expenses as they are incurred such as seed, fertilizer, feed, marketing, utilities, fuel, labor, living expenses and more.

There are two cash flow statements. The first is the actual cash flow. It is a checkbook register of income and expenses. The second is the projected cash flow which takes the actual and makes projections to the future income and expenses the farm will incur.

A projected cash flow statement cannot be created without estimations. This is one reason why enterprise budgets are so helpful since they list out the production expenses for each crop on the farm. The projected cash flow statement will often be requested by lenders as they make decisions on how much money to lend and if that loan can be repaid.



Financing

There are a variety of financing options for buying a farm and starting a farm business. Funding will be needed to start farming, working capital will be needed to get the product going and expansion or mechanization will need additional funding. The most popular source is self-financing. This is using personal funds such as savings to invest in the farm. Friends and family are another possible source of funds. These investors should understand your farm plans and have the agreement in writing.

Bank loans are another popular source of financing. Along with the farm mortgage there could be a loan for equipment purchases, startup expenses, farm structures, animals and more. Often a lender will want to see a business plan, proof of concept or another way of understanding what the funds will be used for and your ability to repay the debt.

Short term credit, lines of credit, or operating loans are often used for operating expenses. This is a way to get funding upfront so that a crop can be grown and repaid after the crop is sold.

Credit cards are another source of funding but should be used with caution. These generally are easy to acquire however charge very high interest rates. Credit cards should be used as a tool for short term purchases and not relied upon for the long term financing.

A few other sources of financing include the Small Business Administration microloans, USDA Farm Service Agency loans, Farm Credit Associations and investors. All three of these will have important considerations and should be researched thoroughly. These programs sometimes partner with other lenders, are contingent upon availability and what is funded and require a process to approve.

There is a common misconception that grant funding is readily available to buy, start or operate a farm. That is not necessarily the case. There are a limited number of farm programs that provide low interest and funding for farm acquisition or expansion. However, grant funding or “free money” to purchase a farm and startup expenses is very rare. Most grants that are available to farms are through a cost share program or a new innovative practice. The most common grants are through the USDA and SARE.

As the farm dream gets closer and financing becomes necessary it will be important to get personal finances in order. A household budget and review of your credit report are two ways to do this. The household budget will help estimate how much profit the farm needs to generate to pay debts and living expenses. Credit reports should be reviewed annually and provide important details about individual credit history.

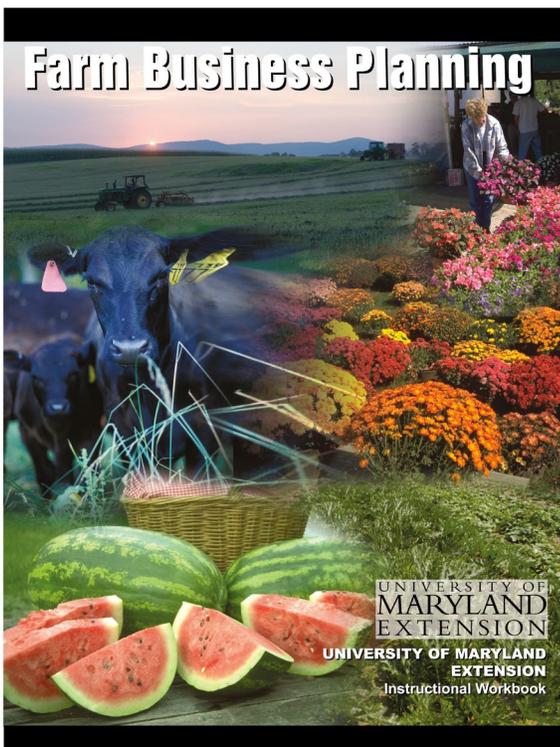
Recordkeeping

Keeping records will be part of the day to day tasks of a farm from production activities to spray applications to financial records. It will be necessary to create a system whether paper, computer or app based to record and organize farm records. Some records will be required by law while others will be helpful in making farm decisions. For financial records take time to review the IRS Farmers Tax Guide publication to learn more about how to categorize income and expenses as well as your tax liability. Make it a habit to start keeping records and schedule time to create a system that makes record keeping a part of the farm routine.

Final Thoughts

When considering financing be sure to have realistic view of your financial position and ability to meet loan obligations. Using a business, production and marketing plan will help with the farms financial success. A comprehensive listing of the startup expenses will provide you and the lender with vital information along with the financial statements discussed in this section. Working capital will outline the variable costs of annual production expenses and lastly a buying schedule will outline future needs and expansion of the business.

A business planning template, budgets, spreadsheets and case study are available at: <https://extension.umd.edu/mredc/business-modules/farm-business-planning-workbook>



Balance Sheet



Income Statement



Cash Flow

Mastering Marketing for New and Beginning Farmers

Ginger Myers, Marketing Specialist, University of Maryland Extension
Director, Maryland Rural Enterprise Development Center

Isn't Marketing Just About Making Sales?

Sales are one-time transactions. Marketing is the process by which you identify a group of people who are willing and able to become and to remain your customers. As a new farmer, you won't have established relationships with customers and potential buyers, yet. You must determine who wants and/or needs your products. These are your potential customers. Identifying your target customer base is one of the first elements of the marketing process.

You should determine which people have the strongest likelihood of becoming and remaining your customer. The common characteristics within this target group will help you determine which people have the strongest likelihood of becoming and remaining your customer. These characteristics will also help you better define your product, identify your best marketing outlets, and determine what marketing tools you use to reach that audience.

Having a marketing plan requires you to think through the process of how a product will be priced and promoted. This planning helps minimize possible emotional reactions and guesswork in making marketing decisions.

Begin with the End in Mind

This statement asks you to think about 5, 10 or 20 years from now and what your business might have accomplished. The following is a list of questions to consider as you are developing your business and marketing plan.

- What do you want to accomplish with your business and how will your marketing efforts support those goals?
- What are your personal goals?
- How will your marketing efforts help you reach the missions and goals in your farm business plan? Will they reflect your production philosophy, a community connection, a life-style pursuit, a career change, or other personal missions?
- What are your financial goals?
- How much profit do you need to generate to be satisfied with your business?
- What is your timetable to reach these goals?
- Are you working towards a part-time operation? Looking for a full-time farm in a certain number of years? Are you planning ahead for a career change or retirement business?

Market Research

Market research is the process of identifying your potential market segments, then developing a targeted strategy for those segments. This research involves gathering information about customers, competition, and overall market potential.

Researching your potential market doesn't need to be expensive in terms of dollars, but be prepared to allot copious amounts of your "planning" time to it.

Before you invest any money in your business, you need to determine:

1. The projected volume of sales of your products and the price you might realistically expect to charge for them. You will need this information to analyze profitability and cash flow potential.
2. Who are your potential customers? What are their ages, income levels, and when and where do they shop? Why would they buy your product rather than your competitors' products?
3. How many competitors are there for this market? What are their strengths and weaknesses?
4. What are the trends for consumption, competition and pricing in your market?
5. Other factors that will affect your product production and distribution (government policies and regulations, technological changes, social and cultural behavior, industry trends)

Answers to these questions will help you better understand what your potential customers, your "target" audience, wants.

Assess Your Marketing Position

Conduct a SWOT Analysis of your marketing position. S.W.O.T. is an acronym that stands for Strengths, Weaknesses, Opportunities, and Threats. A SWOT analysis is an organized list of your business's greatest strengths, weaknesses, opportunities, and threats.

Strengths and weaknesses are internal to the company (think: reputation, growing practices, location). You can change them over time but not without some work. Opportunities and threats are external (think: regulations, competitors, prices)—they are out there in the market, happening whether you like it or not. You can't change them.

SWOT Analysis is useful for your overall enterprise evaluation but it can also be used to help you carve a sustainable niche in a market.

Marketing Mix

Your business will need to earn and maximize its profits if it's to be sustainable. For doing so, concentrate your marketing plan on the 4 P's, i.e. Product, Place, Promotion and Price, known as the marketing mix.

The marketing mix is about putting the right product or a combination thereof in the right place, at the right time, and at the right price to satisfy a customer’s wants or needs. Adhering to the traditional 4P’s of marketing will provide you with a solid foundation as you start and grow your business.

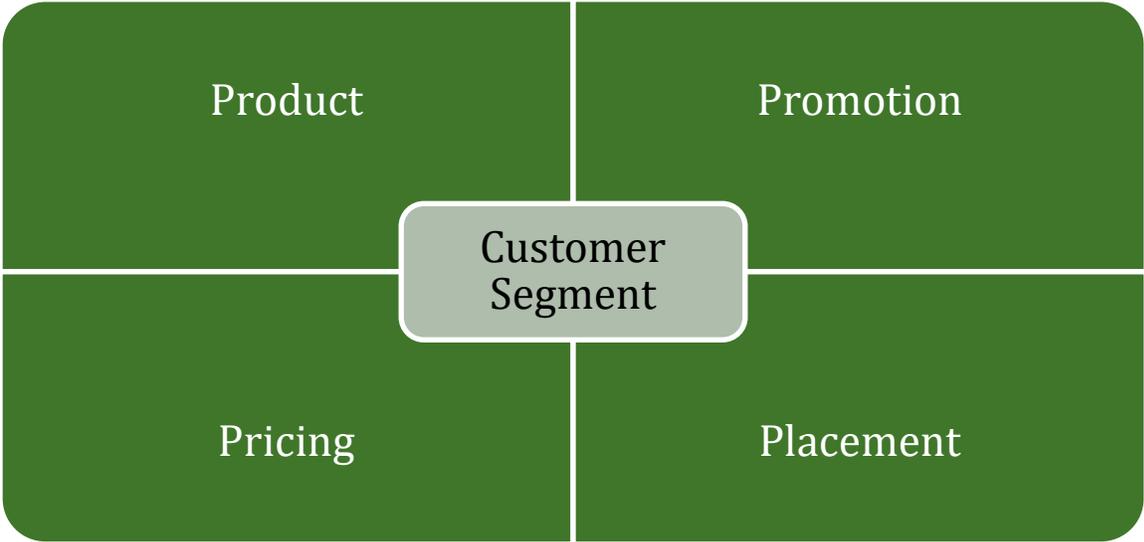
The Product: Exactly what product or service are you going to sell to this market? Define it in terms of what it does for your customer. How does it help your customer to achieve, avoid or preserve something? You must be clear about the benefit you offer and how the customer’s life or work will be improved if he or she buys what you sell.

The Price: Exactly how much are you going to charge for your product or service, and on what basis? How are you going to price it to sell at retail? How are you going to price it at wholesale? How are you going to charge for volume discounts? Is your price correct based on your costs of production and the prices of your competitors?

The Place: Where are you going to sell this product at this price? Are you going to sell directly from your own company or through wholesalers, retailers, direct mail, catalogs or the Internet?

The Promotion: Promotion includes every aspect of advertising, brochures, packaging, salespeople and sales methodology. How are you going to promote, advertise and sell this product at this price at this location? What is the process from the first contact with a customer through to the completed sale?

Creative marketing with the 4Ps constantly questions existing situations and looks for ways to enhance your marketing mix - deleting existing products or services, selling them at a different price, offering them in different places or promoting them differently. However, it does not require abandoning your core marketing concepts.



Write it Down

The best marketing tool you can have is a marketing plan. From defining your goals and mission, to researching and evaluating your marketing position, and then understanding your marketing mix, you've been developing your business's marketing plan.

- Product - What is my product?
- Target Customer - Who will buy it?
- Place and Promotion - Where will they find it?
- Price - How much will it cost?
- Budget - How will I get my marketing done and how much will it cost?

Take the time to write down your plan. A written plan can help keep you on track when marketing opportunities or threats arise. You'll have a framework for decision-making with your overall business goals in mind, rather than a knee-jerk reaction to change.

Summary

Marketing takes time. But, it can be one of the most cost-effective uses of time in your business. As marketing consultant Roy Young states in his article by the same name, "Marketing is the root of all income."



Web Links and Resources – Business Planning

Business Planning Links

- <https://extension.umd.edu//mredc/business-modules/farm-business-planning-workbook>
- Ag Plan - <https://agplan.umn.edu/>
- <http://agrisk.umd.edu/blog/how-to-start-a-business-in-maryland-a-mandatory-checklist>

Financial Links

- IRS Farmers guide - <https://www.irs.gov/forms-pubs/about-publication-225>
- <http://extension.umd.edu//mredc/business-modules/financial-matters>
- <http://extension.umd.edu/mredc/business-modules/farm-business-planning-workbook>
- <https://go.umd.edu/LenderRequirements>
- USDA FSA - <https://www.fsa.usda.gov/programs-and-services/farm-loan-programs/>
- MARBIDCO Website - <https://www.marbidco.org/>

Marketing Links

- Ag Marketing - <https://extension.umd.edu/agmarketing>
- Farm Marketing Resources/ Beginning Farmers - <https://www.beginningfarmers.org/marketing-resources>
- Selling at a Farmers Market - <http://umaglaw.org/farmers-market-vendor-agreement/>
- Farmers Market - <https://www.sare.org/Learning-Center/SARE-Project-Products/Northeast-SARE-Project-Products/Plain-Language-Guides-for-New-and-Under-Served-Producers/Selling-at-a-Farmers-Market>
- Dream, Plan Implement - <https://extension.umd.edu/mredc/business-modules/dream-plan-implement>

Business Planning Review – Questions to Ask Yourself

1. Do you understand the financial statements for a farm business (including a household budget, balance sheet, enterprise budget and cash flow statement)?
2. Does your product satisfy a want or need of your target customer?
3. Have you factored all your cost of production and profit margin into your price? Including your competitive advantage?
4. Have you identified market outlets for your product?
5. Do you have a promotional plan on how you will market your product?





Start Farming

Understanding Licenses, Permits and Certifications for your Farm

Ben Beale, Extension Educator, University of Maryland Extension – St Mary's

As with any business, your farm operation is subject to several laws and regulations. Farm operations also receive several exceptions or special provisions regarding taxes, land operations and the like. Below is a short listing of the commonly required permits or certifications for a farm. There may be others depending on your county, crop or sales channels.

Nutrient Management Plans: Farmers with either gross income of at least \$2,500 or 8 more animal units (1 animal unit is 1,000lbs) are required to have and follow a Nutrient Management Plan. These plans can be developed by a nutrient management advisor in your county Extension office or through private industry. You may also become certified to write your own plan. Plans are normally updated annually. More information is available here: http://mda.maryland.gov/resource_conservation/Pages/nutrient_management.aspx

Nutrient Voucher Applicator Card: Farm operators who apply nutrients (fertilizer, manure, compost) to at least 10 acres of land are required to have a nutrient applicator voucher. The requirement only applies if you, as the operator, apply the nutrient source. If a custom operator or fertilizer company spreads the nutrients, they are required to have a voucher. Vouchers can be obtained by attending a two hour voucher class once every 3 years. The class is conducted by the University of Maryland and there is no test or fee associated with the voucher. More information can be found at: http://mda.maryland.gov/resource_conservation/Pages/nutrient_management.aspx

Private Pesticide Applicator Certification: Farmers who want to purchase and apply Restricted Use Pesticides must first become certified as a private pesticide applicator. No certification is required to purchase general use pesticides, though you must abide by all label instructions. Certification is obtained by passing an examination administered by MDA. The certification is renewed every three years by attending a 2 hour recertification course. University of MD Extension provides review courses, has study materials and hosts the test and recertification in county offices. More information is available here: https://mda.maryland.gov/plants-pests/Pages/licensing_and_certification.aspx

Soil Conservation Plans: Soil Conservation Plans are voluntary plans which provides a blueprint for water and soil conservation practices on the farm. They are developed through the county based Soil Conservation Office. The plan can be a valuable tool for farmers to manage resources and improve profitability. A conservation plan is a working document designed to fit each individual farmer's needs. More information is available here: https://mda.maryland.gov/resource_conservation/Pages/technical_assistance.aspx

Agriculture Use Assessment: Maryland law provides that lands which are actively devoted to farm or agricultural use shall be assessed according to that use. Assume that a 100 acre parcel of land has a market value of \$3,000 per acre. The total value of the parcel would be \$300,000 (100 x \$3,000). The same 100 acre parcel receiving the agricultural use assessment based on a value of \$300 per acre would be \$30,000 (100 x \$300). The taxes using a combined tax rate of \$1.132 per \$100 of assessment would be \$339 [(\$30,000 ÷ 100) x \$1.132] under the agricultural use assessment and \$3,396 [(\$300,000 ÷ 100) x \$1.132] under the market value assessment – a difference of \$3,057 or \$30.57 per acre (source: MD Department of Assessments and Taxation). More information is available here:

<https://dat.maryland.gov/realproperty/Pages/The-Agricultural-Use-Assessment.aspx>

Organic Certification: Agriculture producers who plan to sell, label, or represent products as “organic” must meet the requirements of the National Organic Program (NOP) and be certified. The certification process typically takes three years, though there are exceptions. More information is available here:

https://mda.state.md.us/foodfeedquality/Pages/certified_md_organic_farms.aspx

Building Permits for Farm Structures: The requirements for building permits for farm structures vary by county. Many counties, especially in the rural tiers have reduced permitting requirements for farm buildings. New storm water management regulations are also now required for farm buildings which exceed a certain size. Always check with your local Planning and Zoning office for the county specific requirements.

Marketing and Food Processing: The sale of processed or adulterated food is regulated by several agencies. There are also regulations which affect the sale of products directly from the farm (direct sales) and requirements for collection of sales taxes. For a complete description of regulations surrounding marketing and food processing, visit:

<http://extension.umd.edu/mredc/specialty-modules/food-processing>

Water Appropriation and Use Permit: Required if you plan to withdraw more than 10,000 gallons of water a day based on an annual average withdrawal, from surface or underground waters for agricultural activities. Issued by the Maryland Department of the Environment. https://mde.state.md.us/programs/Water/Water_Supply/Pages/WaterAppropriationsOrUsePermits.aspx

Human Resources Management and the Hiring Process Basics

By Margaret Todd, Law Fellow, Agriculture Law Education Initiative

Disclaimer: The following is intended for educational purposes only and is not legal advice.

Whether hiring a full-time farm manager or seasonal farm hands, the hiring process should be taken seriously. Employers should take the time to comply with labor laws throughout the process of advertising, hiring and employing workers.

Employment Relationships

Maryland is an “at-will” employment state, meaning that in the absence of an express contract, agreement, or policy, an employee may be hired or fired, with or without cause, and without any previous notice, for any non-retaliatory and non-discriminatory reason. However, an employer can either orally or in a written document negate the “at-will” employment presumption by agreeing to only terminate employees for cause, only in accordance with established policies, or by specifying a guaranteed duration of employment. In some cases, however, employment contracts are legally required. For example, the Migrant and Seasonal Agricultural Workers Protection Act (MSPA) requires farmers to use employment contracts with specific provisions when hiring migrant and seasonal employees, and employment contracts are also necessary when hiring H-2A Visa workers.

Types of Employees

When an employment relationship is established, the employer will have various legal responsibilities, depending on the type of employee (discussed later in *Agricultural Labor Laws*). Types of employees include migrant workers, seasonal workers, H-2A visa workers, interns, apprentices, and office workers. Family members are often recruited to help on the farm as well. Immediate family members are not considered employees under the Fair Labor Standards Act (FLSA) or the various Maryland labor laws and are not entitled to minimum wage or overtime.

Employee versus Independent Contractors

Understanding the difference between an employee and an independent contractor is important for an employer. Employers have significantly fewer obligations when engaging independent contractors. An independent contractor has been judicially defined as “one who contracts to perform a certain work for another according to his own means and methods, free from control of his employer in all details connected with the performance of the work except as to its product or result.”

Failing to properly classify a worker as an independent can have steep financial consequences. Even if there is a signed agreement declaring that a worker is an independent contractor, that is not enough by itself to prove that an employer-employee relationship did not exist. Instead,

the predominant consideration is the level of behavioral and financial control the employer maintains over the worker.

Interns and Apprentices

Interns and apprentices are a popular hiring option for reducing the farm workload while also helping the next generation gain practical farming knowledge and experience. Internships and apprenticeships are not interchangeable terms. Separate guidelines provided by the U.S. Department of Labor (DOL) must be used to determine a worker's legal status as either an intern or an apprentice.

Internships provide work experience that corresponds to the intern's academic program and accommodates the intern's academic commitments. Internships are usually short term and the intern receives academic credit in place of monetary compensation. Under the FLSA, interns are not considered "employees" and can therefore be compensated at less than minimum wage. Intern classification is determined by DOL's "primary beneficiary test," using seven factors weighed all together to examine the "economic reality" of the employment relations.

Apprenticeships combine paid on-the-job training with classroom instruction to prepare workers for highly-skilled careers. Apprentices learn from an experienced mentor for typically one to three years and may receive increases in pay as their skills and knowledge increase. Although under the FLSA apprentices are considered employees, an apprentice may be paid less than minimum wage. Maryland Department of Labor, Licensing and Regulation (DLLR) also oversees work-study apprenticeship programs in Maryland.

Volunteers

Volunteers are not paid for work but nonetheless willingly provide their time and effort. Employers using volunteers for their farm operations must remember that individuals cannot waive their right to a minimum wage, and employees may not serve as unpaid or underpaid volunteers in for-profit private sector businesses. A farmer may allow the collection of leftover crops, known as gleaning, with volunteers for a non-profit organization coming onto the farm to glean. Farmers will generally not be liable for injuries to gleaning volunteers of other organizations as long as they provide a warning of known dangerous conditions on the farm.

Job Descriptions

Accurate job descriptions help the farmer attract qualified candidates and help applicants obtain a realistic preview of the job. Job postings should include the job title, a brief narrative summary of duties and responsibilities, hours, wage, and benefits, and required qualifications. If the position requires the ability to do specific tasks, like heavy lifting, operating heavy machinery, or following written instructions, the job advertisement should clearly state those types of essential job functions. Under the Americans with Disabilities Act (ADA), employers are required to make reasonable accommodations to qualified employees with disabilities, unless doing so would pose an undue hardship to the employer. Including a list of the essential job functions is important; doing so will allow a farmer to terminate a worker for not

being able to fulfill known job requirements. Farmers who anticipate hiring migrant or seasonal workers should keep records of written job descriptions, including “the crops and kinds of activities on which the worker may be employed,” for reporting purposes.

Screening and Interviewing Applicants

Once applications are submitted and it is time to screen and interview applicants, employers must keep the job qualifications clearly in mind when coming up with interview questions to figure out who is capable of performing the work. Both state and federal laws prohibit employment discrimination based on personal attributes that have no bearing on the ability to perform the work, i.e. race, religion, national origin, ancestry, mental or physical disability, marital status, age over 40, medical conditions, sex, gender identity, or sexual orientation. Employers must craft interview questions with care to avoid inadvertently asking questions that will expose details on personal attributes like marital status, health, etc. Establishing a neutral and relevant skills test to every applicant is one way to avoid complaints of unfair treatment.

Employment Eligibility Verification and Form I-9

Employers are required to verify an employee’s identity and eligibility to work in the United States, which is completed by having the employee complete a Form I-9, Employment Eligibility Verification (I-9). Ensuring each new employee fills out an I-9 is the employer’s defense against a potential claim of knowingly employing an unauthorized worker. According to the U.S. Citizens and Immigration Services (USCIS) Employer Handbook (M-274), all employers must complete and have an I-9 on file for each person currently on their payroll. Employers are required to physically examine identifying documents within 3 days of hiring an employee; the Employer Handbook provides guidance on which documents are acceptable. Further, employers must retain I-9s for all terminated employees for three years past the hire date, or the date of termination plus one year. Employers should keep careful records in case of a USCIS audit.

Payroll and Recordkeeping

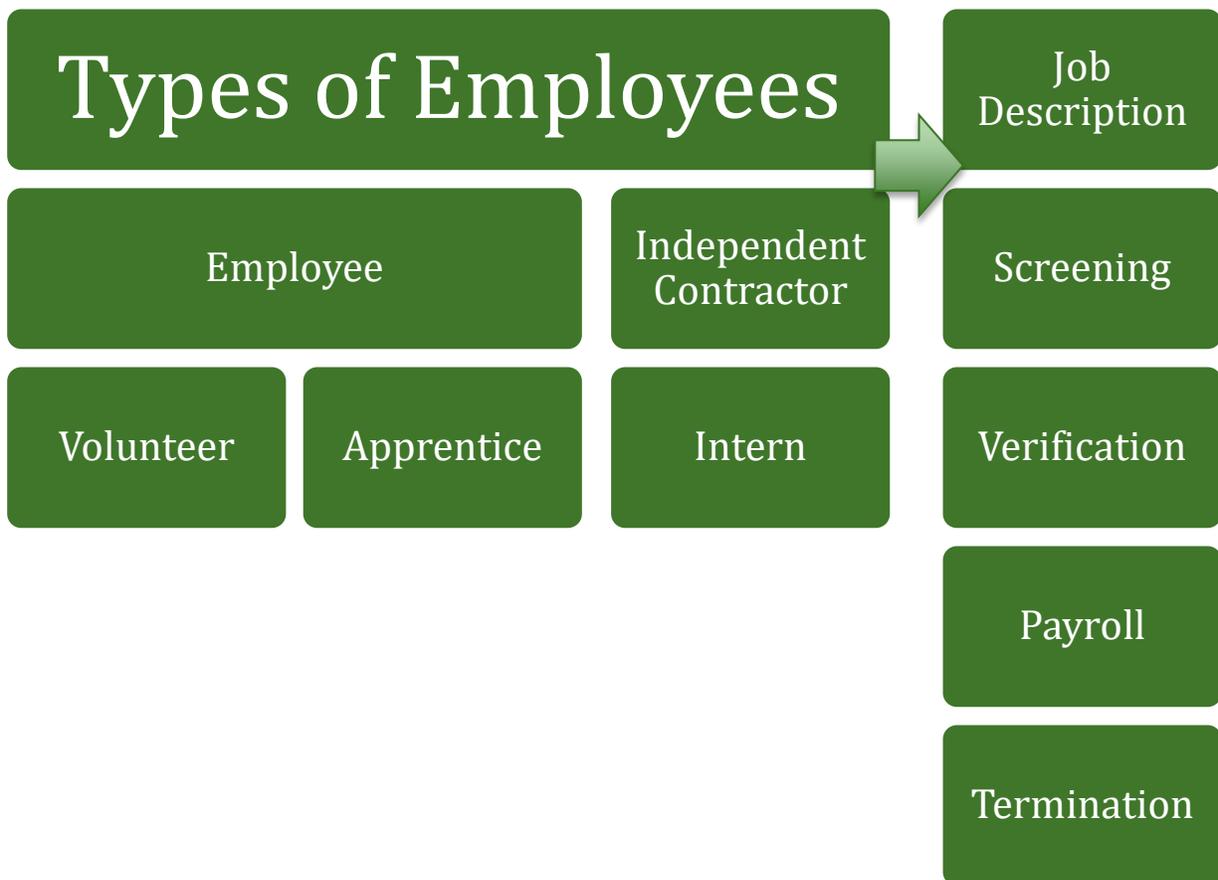
Federal and state laws regulate how and how often wages should be paid, require record-keeping obligations for employers, and require the employer to withhold taxes from employee earnings. Employers are required to pay employees no less often than every two weeks, or semi-monthly. Employers must provide a paystub to each employee on each payday, regardless of the basis of pay. Paystubs must include: hourly rate, or piece rate and the number of units earned, for each activity; correct number of hours worked; total earnings for the pay period; amount and purpose of any deductions, such as for taxes, rent or meals; net pay; employer’s name, address, and identification number, and; worker’s name, address, and social security number. Payroll records must be kept for at least three years. Records used for computing wages, such as time sheets or field tally totals, must be kept for at least two years. Farmers who hire migrant, seasonal, or H-2A workers will have additional record keeping obligations.

Termination

Various labor laws place restrictions on employee termination, including anti-retaliation provisions prohibiting employers from firing employees in retaliation for engaging in protected activities, like filing a workman’s compensation claims, filing a lawsuit for injuries sustained on the job, becoming a “whistle-blower,” missing work for jury duty, helping form a union, or refusing to do hazardous work. Employers should be careful and document reasons for employee termination to protect against wrongful termination charges. Upon termination, employers must timely provide all earned income and accrued leave to the terminated employee, or potentially be subject to punitive damages up to three times the amount withheld.

Conclusion

Each step of the way, employers must remember to satisfy various recordkeeping obligations. Consulting an attorney and tax professional is the best way to make sure records are kept in compliance with all federal and state laws in case the farm ever faces an audit. The hiring process can be long and costly, and managing employee performance is an ongoing process. However, the time and effort required to find and retain the best employees is an investment in the productivity of the farm.



Agricultural Labor Laws

By Margaret Todd, Law Fellow, Agriculture Law Education Initiative

Disclaimer: The following is intended for educational purposes only and is not legal advice.

Growing a farm business will usually require finding reliable and skilled workers to help both on and off the fields. Hiring farm workers hopefully means a thriving and productive farm operation, but it should not be done without an understanding of applicable labor laws. Labor laws cover issues like who is identified as an authorized worker, minimum wage and overtime standards, occupational health and safety standards, insurance requirements, child labor limitations, and more.

This chapter will outline the basics of the numerous federal and state laws applicable to farm businesses in Maryland. References to useful and detailed resources are included throughout for further reading on each topic. It is always advisable to seek legal advice when interpreting and applying laws.

Federal and State Labor Laws and Employment Standards

Federal laws establish the national baseline rules for wage and hours, health and safety protections, often require recordkeeping and reporting, and prohibit discrimination in the workplace. States are allowed to adopt stricter laws. Maryland's employment and labor laws do so by establishing further state level protections for employees.

Federal Fair Labor Standards Act (FLSA) and Maryland Minimum Wage and Hour Laws

The Fair Labor Standards Act (FLSA) is the federal act that establishes the maximum hours for a workweek, the national minimum wage, time-and-a-half overtime standard, and the child labor standards. FLSA applies to all businesses that have at least two employees and at least \$500,000 a year in gross sales. Employees working for smaller businesses may still be subject to FLSA protections if they are individually engaged in interstate commerce, in the production of goods for commerce, or in any closely-related process or occupation directly essential to such production. Whether a farmer is running a farm under a business entity or as a sole proprietorship, the FLSA will typically apply to some degree. A business or worker is subject to FLSA if either the enterprise coverage or the individual coverage applies.

Minimum Wage

The Federal government establishes the national minimum wage, but a state may adopt a higher minimum wage for its residents. Maryland's minimum wage is higher than the federal wage and is expected to increase annually. Localities may also choose to adopt a higher minimum wage, such as Prince George's and Montgomery counties. Unless an exemption applies, the higher minimum wage, whether it is state or local, is the wage employers must follow and pay their employees.

Various agricultural workers, however, are exempt from minimum wage requirements. Maryland's exemptions for agricultural workers largely mirror the federal exemptions. The following are specific types of agricultural employees that are excluded from federal and state minimum wage requirements:

- Agricultural employees who are an immediate family member of their employer,
- Those principally engaged on the range in the production of livestock,
- Hand harvest laborers who commute daily from their permanent residence, are paid on a piece rate basis in traditionally piece-rated occupations, and were engaged in agriculture fewer than 13 weeks during the preceding calendar year,
- Minors, 17 years of age or under, who are hand harvesters commuting daily from their permanent residence, paid on a piece-rate basis in traditionally piece-rated occupations, employed on the same farm as their parent, and paid the same piece rate as those over 17.

Maryland also excludes employees engaged in “canning, freezing, packing, or first processing of perishable or seasonal fresh fruits, vegetables, or horticultural commodities, poultry, or seafood” from the Maryland minimum wage requirements; these employees are still entitled to federal minimum wage payment. Additionally, Maryland allows employers to pay employees under 18 years of age a wage equal to 85% of the state minimum wage, regardless of their type of employment.

Small farm employers also benefit from what is known as the “500 Man-Day Exemption.” Basically, any farm employer that used less than 500 man-days of labor in any quarter of the previous calendar year is not required to pay agricultural workers either state or federal minimum wage. A “man-day” is defined as any day an employee performs “agricultural work” for at least one hour. In order to qualify for the exemption, however, employees must perform agricultural work as that term is defined by law.

Overtime

Under both the FLSA and Maryland law, agricultural workers who are exempt from minimum wage are also exempt from receiving overtime wages. Maryland, however, provides other farmworkers overtime pay after 60 hours/week. According to the U.S. Department of Labor (DOL), a common employer mistake is failing to pay overtime to employees whose jobs are related to agriculture but do not meet the FLSA's definition of agriculture.

To determine whether farm employees are eligible for the agricultural labor exemption, an employer must compare the work performed by the employee to the FLSA's definition of agriculture, broken down into either primary or secondary agriculture. Employers need to remember that each exemption needs to be examined and applied carefully to avoid underpayment of wages. If an employee in the same workweek performs work that is exempt (fits the definition of agricultural work described above) and work that is non-exempt, the employee is not exempt for the entire week and the minimum wage requirements of the law apply.

Child Labor Standards

The applicable rules for agricultural work hours and duties depend upon the age of the employed minor. Generally speaking, minors can be employed outside of school hours so long as they are not asked to perform hazardous duties and are limited to farm work that is performed on a farm. Minors 16 and younger may not be allowed to work in connection with cleaning or operating power-driven machinery (not including office machines), manufacturing, or in connection with hazardous chemicals. In the agricultural context, working in a yard, pen or stall occupied by a stud animal or a sow with suckling pigs, working inside a silo or manure pit, and handling or applying certain agricultural chemicals are considered hazardous duties that minors are prohibited from performing.

Occupational Safety and Health Act (OSHA)

Farmers must take steps to ensure their farms are safe and hygienic workplaces and free from recognized hazards that cause or are likely to cause death or serious physical harm to the employee. Maryland Occupational Safety and Health (MOSH), a division of the Maryland Department of Labor and Licensing Regulation (DLLR), sets and enforces standards for workplace safety and health. MOSH has adopted the federal Occupational Safety and Health Administration (OSHA) rules pertaining to agriculture, although some activities on a small farm are exempt. Regulations include provisions for cool, clean drinking water and well-stocked hand washing and toilet facilities, provided free of charge. Also included are safety measures for tractors and heavy machinery used in agriculture.

Migrant and Seasonal Agricultural Worker Protection Act (MSPA)

The Migrant and Seasonal Agricultural Worker Protection Act (MSPA) is the federal law that governs the employment of migrant and seasonal agricultural workers, creating employment standards related to wages, housing, transportation, disclosure, and recordkeeping. Farmers using farm labor contractors should be aware of the contractor's practices and use only licensed contractors to avoid joint liability for violations of federal and state laws.

In Maryland, the Maryland Department of Labor, Licensing and Regulation (DLLR) enforce protections for migrant and seasonal agricultural workers. Failing to fulfill the duties and responsibilities required by the laws can result in substantial civil and criminal penalties for the employer.

Healthy Working Families Act - Maryland Sick Leave Policy

Maryland's general policy requires employers to provide sick and safe leave to employees who are over 18 years old at the beginning of the year and work more than 12 hours/week. Although Maryland has a sick leave policy, employers are not required to provide sick leave to employees working in the agricultural sector on an agricultural operation. Although farm employers are not legally required to provide paid sick leave, there are many sound reasons to do so, including but not limited to, reducing the likelihood sick workers contaminate produce.

Federal Non-Discrimination Laws and Maryland Equal Pay for Equal Work

As a general rule, discrimination of any kind is prohibited in the workplace. Federal laws prohibiting discrimination include the Americans with Disabilities Act (ADA), the Age Discrimination in Employment Act (ADEA), the Genetic Information Nondiscrimination Act (GINA), and the Uniformed Services Employment and Reemployment Rights Act (USERRA). Maryland also prohibits sex and gender-based discrimination through the Equal Pay for Equal Work Act. These laws are particularly important to remember during the hiring process when interviewing applicants and when deciding to promote or terminate an employee.

Conclusion

Legally employing people involves careful consideration to ensure employees' rights are respected. Consult qualified tax, accounting, insurance and legal advisers who are familiar with farming operations to ensure the best planning and employment decisions are made to avoid unnecessary fines or other penalties for failing to comply with federal and state labor laws.

Agricultural Labor Laws Links

- Recent Decisions Emphasize the Need for Farmers to Understand Ag Overtime Exemptions - <http://agrisk.umd.edu/blog/jbey8pdiviokhn9wbmgv1ldxehhvq3?rq=flsa>
- Child Labor Laws in Agriculture: What You Need to Know, <http://agrisk.umd.edu/blog/child-labor-laws-in-agriculture-what-you-need-to-know?rq=flsa>
- Is My Farm Exempt? OSHA Confusion Continues - <http://agrisk.umd.edu/blog/is-my-farm-exempt-osha-confusion-continues?rq=osha>
- Sarah Everhart, Is Your Hand-Labor Operation Legal? - <http://agrisk.umd.edu/blog/is-your-hand-labor-operation-is-legal?rq=hand-washing>
- Faiza Hasan, Farmers, Are You Complying with MOSH Standards? - <http://agrisk.umd.edu/blog/farmers-are-you-complying-with-mosh-standards>
- Cultivating Compliance: An Agricultural Guide to Federal Labor Law - <https://www.dol.gov/whd/FLSAEmployeeCard/AgGuideEnglish.pdf>
- When is Workers' Compensation Coverage Required for Agricultural Workers? - <http://agrisk.umd.edu/blog/when-is-workers-compensation-coverage-required-for-agricultural-workers?rq=workers%20compensation..>

Farm Insurance Overview

By Margaret Todd, Law Fellow, Agriculture Law Education Initiative

Disclaimer: The following is intended for educational purposes only and is not legal advice.

Whatever the operation may be, risk management is vital to building up an enduring farm enterprise. Successful risk management means understanding your operational insurance needs and the coverage that can help protect your business against loss.

General Liability Coverage

General liability insurance helps protect farm business assets in the face of legal liabilities. When someone is injured on the farm or when someone's property is damaged due to farm operations, products, or employee actions, general liability insurance helps cover the medical bills and legal expenses – including the payment of a settlement or jury award – that the farmer or farm business would otherwise be obligated to pay out-of-pocket.

Liability insurance policies operate the same as any other insurance policy – the business pays an annual premium and chooses the maximum coverage and deductible amounts. For example, if a farm gets sued for \$25,000 for medical costs associated with an injury attributed to a farm hazard, and has \$10,000 in legal fees, but the coverage maxes out at \$30,000, then the farm is responsible for paying the difference of \$5,000.

A farm's coverage needs will depend on the type of operation and the risks inherent to the business. For example, having customers on the farm creates a higher standard of reasonable care for the business, increasing the potential for liability. Whenever members of the public come onto the farm, liability coverage, above and beyond the standard liability coverage, will likely be needed to protect the business if someone gets injured while on the property. The extent of coverage depends on the specific risks and the frequency of on-farm activities.

Duties performed by employees is another consideration in choosing coverage limits should be the duties performed by employees. An employer's common law liability risks can include injuries or property damage caused by an employee. If an employee, while performing job related duties, is negligent and causes injuries to third parties, an employer could be held vicariously liable under a doctrine known as *respondeat superior*. *Respondeat superior* generally only applies to an employee's actions carried out while performing duties within the scope of their employment and for the employer's interests. A general liability policy will typically cover an employer's vicarious liability to some degree. Meeting with an insurance agent and discussing your operation is the best way to determine the appropriate insurance coverage.

Commercial Property Insurance

Commercial property insurance plans are appropriate for businesses with property and physical assets, such as equipment. Commercial property insurance is important to consider even for farmers living on their farm. General home liability coverage usually will not cover farm business losses. The value of the business property will affect the total cost of the policy and coverage limits.

Likewise, personal assets located on business property are usually not covered under commercial property plans. Losses from certain types of natural disasters, floods and other major weather events may not be covered by standard commercial property policies; neither are intentional and fraudulent acts by employees or injuries to workers that occur in the workplace.

Farm Insurance

Since farmers often live and work on the same property, many insurance providers offer farm insurance, which is a combination of a standard homeowner's policy and a commercial insurance policy. Some providers have policies tailored to "hobby" and full-time farms, based on the size and annual income. Each farming operation is unique and a policy can be custom built for the needs of the farmer.

Product Liability Coverage

Product liability insurance is often a part of a comprehensive general liability policy offered by insurance providers and provides protection against financial loss if a farmer is legally liable for injury or damage resulting from the use of a farm product. The provider will need to know all the products sold or planning to be sold – failing to disclose all products may make a policy void in the event of a claim. Product recall insurance is another type of specialized coverage that helps cover the costs associated with removing products from stores and notifying the public of a problem.

Commercial Vehicle Insurance

Maryland requires all vehicles to be insured and sets minimum coverage requirements.

Standard general liability policies do not usually cover auto accidents. Commercial auto coverage is needed to cover damages resulting from an accident of a commercial vehicle, including damage to a third party's property. Cargo coverage is required for the contents or load the vehicle is carrying. Unless specifically listed on the policy, a vehicle policy will not cover animals transported in a truck or trailer. If you routinely transport animals to or from an auction or any other destination, the animals will need to be covered separately on the farm owner's policy.

Crop Insurance

The Federal crop insurance program started in 1938 and is designed to protect farmers against unavoidable and uncontrollable losses caused by natural disasters. Private insurance companies handle the service delivery side of the program (i.e. writing and reinsuring the policies, etc.). The program is overseen and regulated by the United States Department of

Agriculture Risk Management Agency (RMA). RMA sets the rates that can be charged and determines which crops can be insured in different parts of the country. RMA provides policies for more than 100 crops; policy information often varies by crop, from state to state and sometimes from county to county. Federal insurance is also available for dairy and livestock producers. Pasture, Rangeland, and Forage coverage (PRF) is another related protection for livestock producers.

Federal policies are only available through RMA Approved Insurance Providers (AIPs). The private companies are obligated to sell insurance to every eligible farmer who requests it and must retain a portion of the risk on every policy. RMA and insurance industry activities, however, follow a timetable known as the insurance cycle and there are state-by-state enrollment deadlines for farmers to purchase, review, or modify their crop insurance policies. For crops not eligible for coverage under a crop insurance policy, USDA's Farm Service Agency offers the Noninsured Assistance Program (NAP). NAP provides assistance to producers of non-insurable crops when low yields, loss of inventory, or prevented planting occur due to uncontrollable natural disasters or unfavorable weather conditions during the coverage period, before or during harvest. Producers should contact a crop insurance agent for questions regarding insurability of a crop in their county. For further information on whether a crop is eligible for NAP coverage, producers should contact the FSA county office where their farm records are maintained.

Workers' Compensation Insurance

If a farmer has at least three full-time employees or an annual payroll of at least \$15,000 for full-time employees, then the farmer is subject to Maryland's Workers' Compensation Insurance law. In addition to wages, the cost of lodging, meals and other benefits provided to employees are included in the annual compensations calculations. In case of accidental personal injury, workers' compensation insurance funds are used to pay eligible injured employees' medical and funeral expenses. Employees who accept worker's compensation benefits for on-the-job injuries waive any right to sue their employers for the resulting medical and/or funeral expenses.

Maryland Unemployment Insurance Program

Maryland law requires agricultural employers who pay wages of at least \$20,000 during any calendar quarter of the current or preceding year to employees for agricultural work, or employ at least 10 individuals in a period of 20 weeks in the current or preceding calendar year, to participate in the Maryland Unemployment Insurance program. The Maryland Unemployment Insurance program provides pay benefits to workers who are unemployed and seeking work. The program requires the employer to pay contributions into the Unemployment Insurance Fund on the taxable wages paid to its covered employees. Employees must be advised about their rights to benefits and how to make claims for benefits by a posting in a readily accessible location.

Filing a Claim

Always read the policy documents and ask questions of the insurance agent to gain a clear understanding of the policy's coverage and procedures. Insurance policies contain statements of what is covered and what is not covered by the policy. Most insurance policies set specific procedures and time limits for filing a claim and require cooperation with the insurance company's investigators. Policies will differ by provider but many policies require immediate written notice of a possible claim to the producer or insurer. Take and save pictures of the damaged, destroyed, or stolen property, and document any temporary repairs and receipts for repair-related expenses. Do not dispose of any damaged property until the insurer approves the claim.

Conclusion

Insurance is a major expense and investment in the longevity of a farm. Assess the risks inherent to the farm business before shopping around for insurance and comparing prices. As a farming operation grows and changes, so will the business insurance needs. An annual insurance self-audit is a good practice to ensure that new features, employees, pieces of equipment, buildings etc. are covered by insurance policies.

Insurance Overview Links

- Managing Legal Risks for Agritourism Operations - <http://agrisk.umd.edu/blog/managing-legal-risks-for-agritourism-operations?rq=agritourism>
- Specific commodity's coverage in Maryland, see USDA RMA - <https://www.rma.usda.gov/en/RMALocal/Maryland>
- For more information on available livestock policies, see USDA RMA, Livestock, <https://legacy.rma.usda.gov/livestock/>.
- For more information on PRF coverage, see <https://www.rma.usda.gov/Policy-and-Procedure/Insurance-Plans/Pasture-Rangeland-Forage>.
- For a list of AIPs, see USDA RMA, Crop Insurance Provider List for 2019, <https://public.rma.usda.gov/AipListing/InsuranceProviders>.
- Locate an insurance agent or approved insurance provider, see <http://www.rma.usda.gov/tools/agent.html>.
- For more information on applying for NAP coverage, see USDA FSA Disaster Assistance Fact Sheet, https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/2017/nap_for_2015_and_subsequent_years_oct2017.pdf.
- Employers' Quick Reference Guide, Maryland DLLR, at - <http://www.dllr.state.md.us/employment/empguide/empguide.pdf>

Web Links and Resources – Start Farming

- <http://mda.maryland.gov/Pages/Licenses-and-Permits.aspx>
- <http://www.choosemaryland.org>
- <http://umaglaw.org/publications-library/>

Human Resource Links

- When Hiring Migrant, Seasonal, and H-2A Visa Workers - <http://umaglaw.org/download/legal-responsibilities-when-hiring-migrant-seasonal-and-h2-a-visa-workers-pdf/>
- Four Labor Law Mistakes to Avoid This Season - <http://agrisk.umd.edu/blog/five-labor-law-mistakes-to-avoid-this-season?rq=1-9>
- Independent Contractor test - <https://www.irs.gov/taxtopics/tc762>
- Employing interns and apprentices on the farm- <http://umaglaw.org/publications-library/farm-labor/>
- Internship Programs FLSA - <https://www.dol.gov/whd/regs/compliance/whdfs71.pdf>
- Apprenticeship and Training Regulations - Maryland Apprenticeship and Training Program (MATP), <http://www.dllr.maryland.gov/employment/appr/apprrregs.shtml>
- Apprenticeship, <https://www.dol.gov/general/topic/training/apprenticeship>
- Gleaning, Food Banks, and a Farmer's Liability - <http://agrisk.umd.edu/blog/gleaning-food-banks-and-a-farmers-liability?rq=volunteer>
- U.S. Department of Labor, Occupational Outlook Handbook, Agricultural Workers - <https://www.bls.gov/ooh/farming-fishing-and-forestry/agricultural-workers.htm>
- Staffing the Farm Business, in Ag Help Wanted: Guidelines for Managing Agricultural Labor - <http://aghelpwanted.org/FrameBookContents.htm>
- Reasonable Accommodation and Undue Hardship Under the Americans with Disabilities Act - <https://www.eeoc.gov/policy/docs/accommodation.html>
- How Best to Comply with the Relevant Federal and Maryland State Standards - <http://umaglaw.org/download/a-guide-to-agricultural-labor-laws-how-best-to-comply-with-the-relevant-federal-and-maryland-state-standards-pdf/>
- Agricultural Employer's Tax Guide - <https://www.irs.gov/publications/p51>
- Are You Following the Law When you Fire Problem Employees - <http://agrisk.umd.edu/blog/are-you-following-the-law-when-you-fire-problem-employees?rq=performance>

Start Farming Review – Questions to Ask Yourself

1. Do you know what farm licenses or permits your business will need to operate and sell?
2. Does your business plan include employees in the future?
3. If you plan to hire employees do you understand your responsibilities as an employer?
4. Have you reviewed your insurance needs to protect your farm and personal assets?
5. Are you ready to start farming?



Conclusion

Congratulations on finishing this Guidebook for new and beginning farmers. If you return to our website <https://extension.umd.edu/newfarmer> where you may have found this guide, you'll see four key words on our homepage's banner. Those are **Explore, Refine, Develop and Implement**. This guide was meant to help you navigate the first three of those. Now it's your turn to implement. We strongly encourage you to start some enterprise no matter how small to feed your desire to become a farmer. Raising a few chickens or growing some veggies in your garden is at least a start while you are honing skills and looking for suitable land.

One of my favorite books to recommend to new farmers is "*Letters to a Young Farmer on Food, Farming, and Our Future*." It is a compilation from three dozen esteemed writers, farmers, activists and visionaries that addresses the highs and lows of farming life. Farming requires a wide variety of skills and rarely does anyone enter farming with all the innate skills necessary to be successful. You will need to become an accomplished generalist. These letters urge all new farmers to never stop learning and seeking help from others for the skill sets you don't have. Keep this Guidebook close in your resource library and refer to it for clarification and links to the people and resources you need. Farming as a profession is constantly evolving. Continuing education and training will be necessary to succeed.

The list of chores and duties required to run a successful farming operation seem overwhelming. I know a farmer who says, "If you get behind a day on the farm, you'll need three to catch up, if you're lucky." Don't let the myriad of tasks to be done derail your farming efforts. Return to the "Roadmap for Success" presented in this Guidebook and get your farming dream back on track for success.

Farming; some are born to it, some self-select but, for sure it is a business that also becomes a lifestyle. That is why much of this Guidebook is about the business of farming. Neglect the business side of your farming enterprise at your own risk. We hope you found the information in this Guidebook useful on your journey of becoming a farmer but, remember that any journey is not just about the destination but our experiences, connections and colleagues we meet along the way.

- Ginger Myers, Marketing Specialist, University of Maryland Extension

