

Fact Sheet # 4 Farm Infrastructure



Evaluating Your Farm's Infrastructure

Different farm enterprises will require different types of infrastructure, equipment and resources. It is important to have a good idea of what supporting infrastructure your operation will require and to inventory what exists. A good inventory will help determine whether the enterprise you are considering is feasible at this point, or whether you have some work to do. As you evaluate what you will need for your farming enterprise, also begin to track the potential costs of necessary improvements.



Ask yourself:

Will I have livestock that need housing?

Will I need storage facilities for livestock feed, equipment, or products that I will produce?

Will I need a barn or greenhouse, or a structure for washing, grading and packing produce? Is refrigeration needed and will I need specialized facilities for processing?

Do I want to live on or off the farm?

Buildings

Consider what types of buildings will be needed for the agricultural enterprise you are considering. Take inventory of existing buildings. Are these in good repair? Are they adequately sized for your enterprise? You may be able to rent facilities, so keep an open mind when inventorying. Also keep in mind more affordable, temporary structures such as hoop houses (also called high tunnels). There are a number of good web sources for learning

more about hoop structures, including guides to constructing them:

- Hightunnels.org
- [Washington State University Extension](#)
- [New Entry's 'Building a Greenhouse' video](#)
- [High Tunnels: Using Low-Cost Technology to Increase Yields, Improve Quality and Extend the Season](#) from the University of Vermont
- [The Hoophouse Handbook: Growing Produce and Flowers In Hoophouse and High Tunnels](#), part of the Growing for Market series edited by Lynn Byczynski
- Michigan State University's [hoophouse blog](#)



Typically, towns in Massachusetts do not require a permit to put up a simple hoop structure; however if you intend to bring in electricity or large equipment, you will need to use a licensed electrician and may need a permit.

Power Source

Operations may require different power levels, so make sure that there is adequate power capacity on your farm. Over-loading older or limited circuits can be hazardous and even disastrous. You may wish to consult with a licensed electrician to determine if your electrical source and wiring is adequate for your needs. Consider having a back-up generator on hand in case of power outages.



Image source: American Netting

Livestock Fencing

If you plan to have livestock, you will need fencing. Livestock species vary in their fencing needs; research what type of fencing you will need for your operation, including permanent or moveable fencing. Check with your local USDA Natural Resource Conservation Service [NRCS] Office or [Conservation District](#) for technical assistance. NRCS provides funding for fencing under the [Environmental Quality Incentives Program \[EQIP\]](#).

Deer Fencing

Deer are a major limitation to the production of horticultural crops including fruits, vegetables and ornamentals. Increasingly, farmers need to invest in deer fencing in order to successfully grow these crops and minimize losses. For information on deer fencing, check Cornell University's [resources for deer defenses](#). UMASS Amherst's [vegetable program](#) also has information on avoiding damage to your crops from deer. Deer fencing is sometimes allowed under the EQIP cost share program.

Water Supply

Water resources include streams, rivers, lakes, ponds, wetlands, springs, wells, aquifers and public sources, as well as any means of conveying the water to your facility. You should be familiar with the location of the water resources on your farm. Consider what the water needs will be for your enterprise. For example, horticultural enterprises need a source of water for irrigation and for washing crops for market. Livestock owners will need to have a reliable and potable source of water for their livestock to drink. USDA [EQIP funds](#) are available to help construct or enhance water supply systems on your farm.



Soil Drainage

Land drainage, the removal of excess water from the soil, increases the productivity of farmland. Most soils with poor drainage cannot be worked until later in the planting season which cuts into the growing season of a crop. Most crops grow best in well-drained soils. Land drainage can be accomplished through a variety of strategies such as ditches, sod waterways or tile drains. You will know if tile drains have been installed in a field because there will be an outlet into a ditch. Make sure outlets are maintained to allow excess water to be removed from a field; avoid draining water onto another person's property. It is important

Ask yourself:

Is there enough water for my operation?

Is there enough water pressure for your needs?

Is there a way to bring water from its source to where I need it?

Will I need to install water lines, irrigation structures or animal watering facilities?

Keep in mind that all water lines and structures will need to be appropriately sized to fit their purpose. For example, if water lines are too small, you may not be able to deliver enough water to your livestock-watering trough to meet their needs.

to get assistance from a soil conservationist or engineer when planning a drainage system. Be aware that draining wetlands is illegal, so be sure to consult with your state's Department of Agriculture to find out if your land qualifies as a wetland or not.

Fact sheet #5 - Financing Farm Operations - includes more details on options for financing your farm operations.

Additional Resources

The USDA NRCS [Electronic Field Office Technical Guide \(eFOTG\)](#) is an excellent resource for identifying conservation practices that may be needed for your farm operation. Landowners should seek assistance from their local NRCS Service Center office, RC&D office, or technical service provider for additional information.

USDA's [Massachusetts Rural Development Office](#) may also have information on helping to fund infrastructure development on your property. Contact them at [413] 253-4300.

The [U.S. Environmental Protection Agency](#) has a helpful [website](#) dedicated to soil drainage that includes information on best management practices.

