
STARTING A GARDEN FROM THE GROUND UP



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INTRODUCTION

Growing food and medicine connects us to ourselves, each other, our culture, and the earth in powerful and renewing ways. Gardening is for everyone—whether you’ve been growing one since you were young, or are about to start one for the first time. This guide lists and describes some basic steps of establishing a new garden on a patch of lawn or other piece of land. Not all may be relevant to your situation so take what is useful to you, and most importantly, enjoy your gardening journey!



1. SITE SELECTION: KEY COMPONENTS

Many factors go into selecting where to establish your garden. Spending time looking at some of these different variables before digging can contribute greatly to the success of your garden over time.

CULTURAL OR TRADITIONAL PRACTICES

At UTTC, we are fortunate to have a wide diversity of cultures represented on campus, many that practice traditional knowledge around food and gardening. For some, referencing those practices, including talking to family and elders can be a great place to start for finding a good spot to grow food, medicine, and flowers.



SUNNY

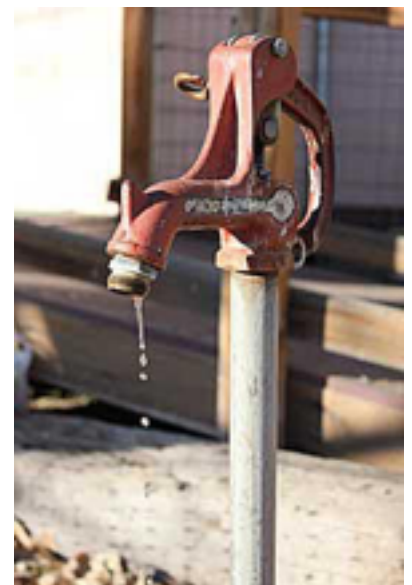
When choosing a spot to garden, full sun is best, although not always available. Take a day or two to watch how the sun crosses your yard, keeping in mind trees that may leaf out later in the season. Try to choose a spot that is completely or mostly sunny, for most of the day. Sites that are south or west facing tend to be hotter and dryer over the course of the season can be great for crops like tomatoes, eggplant, and peppers. Spots that are partially shaded shouldn't be discounted, just realize they might not be as productive as sunnier locations.



Here's a 1st year garden that had been turf grass just a few months prior. This site gets full sun until about noon, then partial sun until early evening, at which point it becomes full shade. Not a full sun location, but a productive garden nonetheless.

ACCESS TO WATER

Access to water for irrigating your garden should be factored into your location. As a rule of thumb, your garden should get about 1" of precipitation per week, whether from rain or irrigation. If you are overhead watering, consider setting out a container in the garden to measure how much water is being put down during a given time period. Rain gauges are great, but buckets work too.



SOIL



If you have a choice in between different soil types in your yard, look for loamy soils—not sandy, not clay or silt, but somewhere in between. Soils with a loamy texture have the ability to drain water through the soil profile, but not too quickly, and also hold onto fertility either naturally present or added. Loamy soils are widely distributed throughout ND, more than likely soil quality will not be a major issue in your garden site selection. If you are interested in detailed information about the soil where you are going to garden, check out the Natural Resources Conservation Service’s Web tool, Web Soil Survey. Although not completely user friendly, with a nationwide inventory of soil information, it’s still a great resource.

<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.html>

WHERE DOES WATER FLOW?

If your yard or potential garden spot has any kind of grade or slope, consider if you will have any issues with soil erosion or washout during intense rainstorms, so typical of summers in the Northern Plains. Natural water pathways during dry times might not be obvious or stand out, so take a minute to step back and see if the area you are looking at is part of a larger swale where water might collect or sit, or slope where it might run off.

Another way water flows, particularly in urban landscapes is off of buildings. If you are siting a garden next to the wall of a building, look up to see where and how rainfall will drain off of the roofline and consider how that might impact your garden positively or negatively.



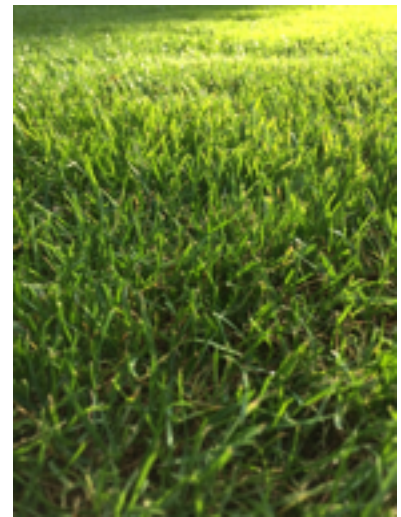
CURRENT GROUND COVER



Consider what is currently growing in the spot you'd like to garden. Is it turf grass, annual weeds, perennial bindweed, or quackgrass? Each of these scenarios requires different treatment to get it into shape for a garden.

Easiest—Annual weeds, if small enough can just be worked into the soil when you dig or till. Pigweed or amaranth, and lamb's quarters are a couple examples of annual weeds that can be easily worked into the soil when prepping your garden space.

Ok—Turfgrass—a lawn intentionally seeded with lawn mix can usually be dug up and eliminated without too many future problems. Might require some initial raking during digging/tilling to remove. Root systems tend to be relatively shallow and non-invasive.



Requires some planning/can be a bit of work: Quackgrass or perennial bindweed, really any perennial weed with spreading rhizomes can be hard to get rid of in the short term. Some plants are adapted to reproduce through lateral shoots in addition to making seedheads—quackgrass is one of the most common. This adaptation

makes these plants extremely competitive and persistent, since even a small section of rhizome can produce above ground growth. Covering with black plastic a year in advance can be a way to weaken the plants, and in some cases, eliminate them completely without the use of chemicals. If this is your only spot available for gardening this season, consider the use of landscape fabric or other plastic mulch to keep the majority of ground covered to keep them from dominating your garden space. Spending time raking and picking rhizomes out of the spot when digging is also an option, however very time consuming. Check out this resource with more information on biology and organic management of quack grass <https://newfarmerproject.wordpress.com/2015/06/08/outsmarting-quackgrass/>

AVAILABLE

Not to be overlooked, sometimes the best garden space is the one that's available! Especially in urban environments, it can be hard to find space that meets all of the components listed above, and we simply go with what's available and might work.

2. STEPS BEFORE YOU DIG

CALL 811

Be safe when you dig. Call 811 several days before you dig--locators will mark utility lines free of charge, usually within a couple days of calling. No need to wonder about hitting gas line, and no job too small—just call.

<http://call811.com/before-you-dig/do-i-really-need-call>





MEASURE AND STAKE OUT

Deciding how big of a space you'd like to garden is a personal choice, and likely depends on how much space you have. Whatever the dimensions, whether it's a square, circle or other shape, measure and mark before you start digging. It's easy to get off track when you're tiling or digging and you may end up with a garden that doesn't match what you initially planned.

3. DIGGING

BY HAND WITH A SPADING FORK

Digging your garden with a spading fork is one of the most labor intensive ways to establish a garden, but it is also one of the most accessible for smaller areas. If you don't already own one, a spading fork can be purchased at most hardware stores for around \$30.



Simply put, you should be able to dig a garden almost anywhere with this tool.



Established lawns will likely come out in clumps that can be shook out and set aside.

DIGGING BY MACHINE (ROTOTILLER)



If you have access to a rototiller, working up your garden space can be a bit less labor intensive, and is one of the more common methods of establishing a space. Many rental or hardware centers offer hourly rentals of rototillers, or you might find one to use by asking neighbors and friends. Particularly if you live in a rural community, asking around might be one of the best ways to track down a rototiller.

NOT DIGGING (NO TILL GARDENING)

No-till gardening is becoming increasingly popular, and involves laying down layers of mulch, compost, and other material to a depth that plants will grow in. There are numerous online videos and resources on this method. Here are a few to start with:

<https://ucanr.edu/sites/ucmg2014conference/files/200498.pdf>

<https://sfyl.ifas.ufl.edu/lawn-and-garden/no-dig-garden-beds/>