

Sattin Hill Farm Course

Module 14: Tools & Supplies

Introduction

In this module, Josh reviews the tools needed for bed prep, soil work, harvesting, planting, and nursery management.

Josh has gone over some of the tools he uses in previous modules, but this module will consolidate that information into one place and additional details. There are links to vendors where these tools can be purchased.

Less Is More

Over the last few years of refining his systems, Josh has narrowed down his selection of tools, thinning out those that weren't necessary. He reduced clutter and increased efficiency.

Tool Storage

It's vital to have a safe, central place to store tools. Josh built a simple rack with a corrugated roof for most of the field tools to protect them from the rain. He has another storage shed nearby for other tools that need more protection from the weather. A tool shed near your workspace reduces your footsteps and saves time.

Josh's tool rack is directly next to the beds. He recommends having multiple tool setups next to different field plots for larger farms. Buying duplicate tools will pay for itself in the labor time saved by the end of a season.

Hard Rake

The first rake Josh uses is a standard metal rake with fixed, inflexible tines. Its primary usage is to spread compost and build beds. It doesn't get a lot of use otherwise, but it is still an essential part of his toolkit.

Leaf Rake

He uses a leaf rake with flexible tines after a bed has been cropped out. This is to clear out any residual crop residue and wood chips that inevitably work their way in from the paths.

Landscape Rake

The third rake Josh uses is the 36" wide landscape rake. This rake is for the final step of the bed prep process to smooth and level the compost. Though he uses the 30" standardized beds, the 36" wide landscape rake works well when pulled at an angle. If you prefer a 30" rake, Johnny's Seeds sells a 30" Bed Preparation Rake for this process.

Broadfork

The broadfork is a huge part of building soil health and structure without causing too much damage. Josh uses a custom-made broadfork that a local friend fabricated for him. Josh also highly recommends the Meadow Creature Broadfork sold by Paperpot Co as an excellent and readily available broadfork. They are virtually indestructible and come in different sizes to suit your stature and soil type.

Josh believes that with proper use of the broadfork, it will hopefully make itself obsolete after a few seasons when you incorporate the no-till practices. However, a broadfork is crucial when starting a new farm, especially if you're breaking new ground.

Shovels

Having a quality shovel or two is another essential.

Bedding Fork

The 10-Tine Steel Bedding Fork is ideal for moving wood chips. It goes into a pile nicely, and the closeness of the tines prevents wood chips from falling through when shoveling them. Other forks with fewer tines and wider spacing will not work quite as well, and shovels create too much resistance when trying to plunge them into a wood chip pile.

Tilther

The drill-powered tilther from Johnny's Seeds is a fantastic tool for incorporating soil amendments and smoothing out the soil before planting. It could technically be considered a "tiller," but the fact that it only works the top 1-2" of soil helps minimize soil disturbance and does not invert the soil profile. While it is optional, it remains one of Josh's favorite tools on the farm.

Josh recommends investing in a high-quality drill to use with the tilter. He uses a DeWalt drill with a heavy-duty 6 amp battery; one charge will allow him to work several beds.

Collinear Hoe

A collinear hoe is excellent for light cultivation and is referred to as a “thumbs up” tool. Gripping the long-handled hoe with your hands in the thumbs-up position encourages an upright posture while working. Regardless of your age or abilities, choosing tools that help protect your back with repetitive tasks will serve you well in the long run. The head of the collinear hoe consists of a flat blade that rides parallel to the level of the soil, slicing small weeds without kicking dirt onto your crops. It’s great for precision cultivation in and around low-lying crops such as lettuce.

Wire Weeder

A wire weeder is the other hoe Josh regularly uses on his farm. This hoe is similar in function to the collinear hoe, except it has a triangulated wire head rather than a blade. It works best in already loosened soils, disrupting tiny weeds before they can establish. The smooth wire is also nice when navigating around drip tape to avoid damaging it, as you might with a collinear hoe.

The “Cart Port”

Josh built a custom lean-to to protect his wheelbarrow and garden cart from rain and maximize their life spans. Like the other structures, it is strategically located close to where the tools are used.

Wooden Stakes & Twine

Wooden landscape stakes mark the corners of Josh’s permanent no-till beds. He recommends having extras on hand since they occasionally break. He uses standard mason twine with wooden stakes to mark the sides of the beds when prepping and planting. Have an extra spool on hand. Mason twine is generally available at any hardware store.

Garden Cart

Josh uses the Vermont Garden Cart. It holds six five-gallon buckets perfectly. It primarily transports buckets of compost and wood chips, which are heavily used in Josh's no-till bed system. He fills the buckets while they sit in the cart, then transports them to the beds.

Wheelbarrow

Having a quality wheelbarrow or two is essential for every farm. Flatless tires are also a big plus. Eliminating the need to repair flat tires is one less task to drain your time.

Silage Tarps

Josh stores his silage tarps next to the Cart Port. Refer to the bed prep module for how and why to use silage tarps on a small farm.

Jang Seeder

Josh's number one planting tool on his farm is the Jang Seeder. Though it is expensive, he recommends the Jang as an essential tool for any farm attempting to make a profit as a small business. Its precision leads to higher yields, lower frustration, and ultimately more profit for your farm. The Jang Seeder is available for purchase at Paperpot Co.

Gridder

The gridder is a long-handled tool with a rolling spool mounted at the base. It imprints the soil with lines marking rows and cross lines marking in-row spacing. The grid made provides a pattern for the grower to quickly hand-transplant their crops at perfect spacings. There are several spools available to accommodate different spacings for various crops. Reference the transplanting module for a more in-depth description of the gridder.

Early iterations of this tool were first created by farm tool designer Josh Volk, though the concept has been used for many years.¹

Josh primarily uses the 3x3 spool and the 4x4 spool. Rather than constantly swapping spools on the one handle and mounting bracket that came with his kit, he recommends buying a second handle/bracket, so each spool has its own.

Paperpot Transplanter

¹ Josh Volk, <http://www.joshvolk.com/oldsite/Q%26A/rollingbedmarker.html>

Josh doesn't use the Paperpot Transplanter in his system, but he credits it as an important game-changing tool for many small farmers. It can save a lot of time otherwise spent on transplanting crops by hand.

Soil Blocker

Josh uses a standup soil blocker that makes 35 one-inch soil blocks at a time. The standup soil blocker will make it possible if you are making soil blocks at any scale. There are less expensive handheld soil blockers on the market, but they would be too time-consuming when making a higher volume of soil blocks for a small farm business context.

Trays

Josh uses the wide-mesh bottom trays from Johnny's Selected Seeds for his soil blocks. These trays work well; they have ample airflow through the mesh bottom, which also helps facilitate air pruning. Another helpful feature is their solid side walls help retain some moisture, which is great for soil blocks that are prone to drying out quickly.

Watering Wand & Labels

Josh's preferred watering wand is the Wonder Waterer from Johnny's Seeds. It creates a fine, gentle mist for watering in freshly sown seeds. When it comes to labeling, Josh simply uses painter's tape and a Sharpie to label his trays with the crop name and date sown.

Harvest Totes

Josh uses 18-gallon storage totes from Lowe's. The 18-gallon totes fit nicely in the 12-inch walkways Josh has between beds. He labels the totes either "Harvest" or "Field Tote" to ensure that the totes for a final product stay clean and sanitary. This procedure will be explained in greater detail in the harvest module.

Mechanical Scale

While working in the field, Josh uses his mechanical scale that doesn't require batteries for weighing out his harvest. He places the scale in the path and the harvest tote on top. After tearing the weight, Josh harvests directly into the tote while monitoring the scale to ensure he doesn't harvest too much or too little to fulfill the order. This scale eliminates worries about batteries dying or the scale shutting off, both possibilities with a digital scale. He also uses the mechanical scale for weighing out soil amendments.

Digital Scale

Josh eventually invested in a high-quality digital scale to weigh finished, packaged products ready for delivery. After going through multiple cheaper scales that continued to break, he found one that is accurate and reliable. A scale of this caliber is essential, so you don't short your customers. Josh highly recommends this investment.

Harvest Knife

Josh uses a 7" Victorinox Serrated Knife and recommends always having a few around. Its high-quality blade holds an edge for a long time, and the red handle makes it harder to lose.

Quickcut Greens Harvester

If you grow baby greens, using the Quick-Cut Greens Harvester from Farmer's Friend is a must. Whether you grow arugula, baby kale, mesclun mix, mustard greens, or spinach, you'll need one of these. Compared to harvesting baby greens by hand, the time saving is exponential.

Delivery Vehicle

As he was starting out, Josh used the family station wagon to deliver produce. He has since upgraded to a minivan. Vans are preferable to open bed trucks; they are covered from the elements and easily provide climate control.

Coolers & Ice Packs

Josh uses large coolers with ice packs to transport his greens and veggies during the hot summer months. This system will be explained in greater detail in a future module.

Links to Josh's Tools & Supplies:

- [Hard Rake](#)
- [Landscape Rake](#)
- [Leaf Rake](#)
- [Broadforks](#)
- [Shovel](#)
- [Bedding Fork](#)
- [Tilther](#)
- [Dewalt Drill](#)
- [Big Batteries](#)
- [Collinear Hoe](#)

- [Wire Weeder](#)
- [Vermont Carts](#)
- [Wheelbarrow](#)
- [Silage Tarps](#)
- [Jang Seeder](#)
- [Gridder](#)
- [Paperpot Transplanter](#)
- [1" \(35 block\) Stand Up Blocker](#)
- [2" \(4 block\) Hand Blocker](#)
- [Soil Block Trays](#)
- [Wonder Waterer](#)
- [Harvest Totes](#)
- [Analog Scale](#)
- [Digital Scale](#)
- [Harvest Knife](#)
- [Greens Harvester](#)
- [Cooler](#)
- [Ice Packs](#)