

From Lawn to Habitat Garden

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Converting your lawn into a vibrant plant community teeming with pollinators, birds and other desirable garden inhabitants is a rewarding process that can be very low tech, eco friendly and manageable. In my capacity as a nursery owner, I have been involved with many lawn conversion projects in the Appalachian Highlands region. Here is my recommended process in a nutshell.

When transforming lawn (or former pasture) into garden, I prefer to use a sheet mulching technique that relies on some inputs at the front end, then patience as soil microbes and time do the rest of the work. Start by weedeating (or burning) the lawn as close to the ground as you can. Next, cover the ground, including all the grass you just trimmed, with cardboard, laying it out with no gaps between the sheets. You will cover this layer with organic matter, whatever you can get your hands on, and as thick as you can make it. Even just 2-3 inches of chipped wood will conceal and secure the cardboard and allow the magic to happen in the soil beneath. A thicker layer, including leaves, leaf mold, or composted manure, will enrich the soil and optimize growing conditions for the plants that will eventually follow.

- Tip 1: When laying out cardboard, it helps to work on a windless day. Even a slight breeze can lift or shift the pieces and make your job more difficult. Wetting the cardboard can help, or do what we do and secure the cardboard as you go by throwing a few scoops of organic material in the center of each piece as you lay it down, spreading it out to cover small sections at a time.
- Tip 2: What organic material you use to cover the cardboard will be influenced by what is available to you and your budget. In our area, it is relatively easy to find composted manure, which is generally excellent for building soil. However, you must use caution when adding manures to your soil at this time due to the prevalence of a commonly used herbicide called Grazon. Farmers use Grazon to eliminate broad leaved plants from their hayfields and pastures. The herbicide lingers and passes through the guts of animals that eat affected grass or hay, and persists in their manure. That manure then kills broadleaved plants in pastures, or in the gardens of those who spread the contaminated manure. Unfortunately, this residual affect lasts for years, and few plants are immune from it. Many animal owners have no idea that the hay they feed their animals has been grown with Grazon, so they cannot be relied upon to assure you that the manure is free of this herbicide. So, before accepting any animal manure, even aged manure, you should test it to insure it is safe to use. A simple way to test it is to mix a small amount of the manure with an equal amount of soil or potting mix in a pot, then plant a few fresh bean seeds in the mix. If they grow and thrive, the manure is safe, but if you start to see twisted, gnarled secondary

leaves, the manure is likely contaminated and should not be used to improve garden soil where broad leaved plants will be grown. Broad leaved plants are basically any plant that is not a grass.

- Tip 3: If you are lucky enough to have easy access to safe manure, compost, or leaf mold, spread these materials over the cardboard first, then cover with whatever leaves or wood chips you have.
- Tip 4: as with any project where you add height to the grade, you can affect the grade and drainage of your site by building up a planting site, even if only by a few inches. When working close to your home or other structures, be aware of how your work will affect drainage away from the structure. This consideration may affect where you choose to place your habitat garden, or cause you to install trenches and low areas to move water away from structures as needed. Incorporating a low, rain garden area may help control runoff from your site, and could be part of an overall water management plan to prevent structural damage due to drainage issues.

Once you have spread your cardboard and organic material, leave the site alone for a time to allow the layers to smother the lawn and build the soil beneath. How long it takes to work will depend on the time of year you start. If smothering in fall, allow to sit all winter. If working in spring or early summer, the process is faster because the soil microbes are more active in warmer weather. That said, planting in mid summer requires that the gardener tend new plants pretty closely to make sure they are adequately hydrated as they establish. Generally, if we prep a site in spring or summer, we wait until fall to do the planting, and if we prep in fall we plant perennials in spring. Shrubs and trees can be planted when perennials are planted, but we often go ahead and plant woody plants even before we lay cardboard. We just work the cardboard around them and mulch around them well.

You will find that this technique works very well to kill most lawn grasses and other plants, but one weed that will keep coming back is Bermuda grass. Sheet mulching will not kill Bermuda grass, but it will give you and your planting a head start. Bermuda grass does not tolerate shade and your plants will out compete it with your help. Although it will take some work, especially in the beginning, even a heavy infestation will eventually weaken if you keep hand pulling and smothering as needed. As your shrubs and perennials grow taller and closer together, they will shade the ground beneath and your weeding will get easier and easier.