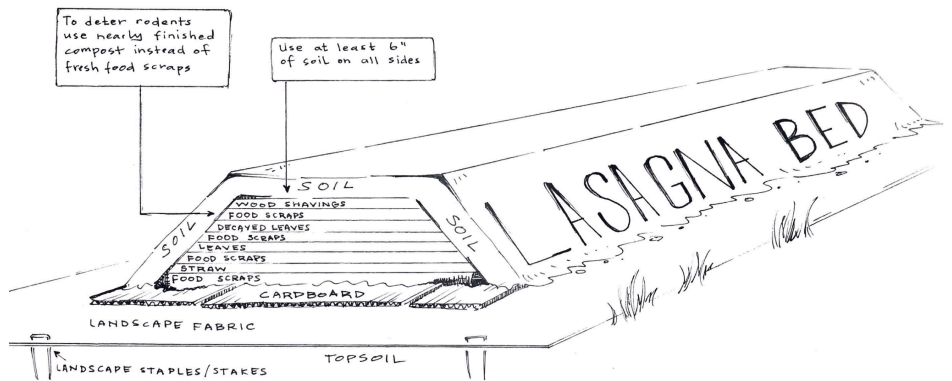




Lasagna Compost Bed



OBJECTIVE	CATEGORY	DIFFICULTY	GROUP SIZE	TIME
Create a 3' x 2' planting bed, recycle greens (nitrogen) and browns (carbon)	Composting and Farming	Easy	4 people	60 min.

MATERIAL LIST	TOOLS & EQUIPMENT
10 gallons of water	Gloves
Enough cardboard to cover a 3' x 2' footprint	2 shades
Landscape fabric, and metal pins (if concerned about weed pressure/soil toxicity)	1 bow rake
1/3 wheelbarrow full of straw or hay	1 pitchfork
1 wheelbarrow of 8 -12 week old decomposed food scraps (bin #2), OR 1 wheelbarrow full of a combination of alternative greens such as coffee grounds and cut-up weeds that are not mature	1 pair of scissors OR knife
1/3 wheelbarrow of fallen leaves (less broken down)	1 chopping tool for breaking down whole foods
1/3 wheelbarrow of older leaves (more broken down) OR combo with other partially broken-down browns / more decomposed straw	Watering can with a flower head
1/3 wheelbarrow full of wood shavings or finely broken-down leaves	1 wheelbarrow OR 1 - 27 gallon tough bin
1 struck (level with rim of barrow) wheelbarrow of finished sifted composted	1 permanent ink marker
1 - 5 gallon bucket of garden/sandy soil	4 wooden stakes OR labels
1 piece of wood to make a ID sign and date	1 bucket for non organic material (contamination)
	1 Hammer

HOW TO
<ol style="list-style-type: none"> 1. Create a 2' wide by 3' long space that is clear, level, and flat. 2. Lay cardboard flat onto 2'x3' space, cut to size, remove non-organic material such as tape and staples. Soak with water in a wheelbarrow (for all soaking steps, use approximately 1/2 gallon of water). 3. Begin building the lasagna layers: <ol style="list-style-type: none"> a. Greens: Shovel on a 1"-2" thin layer of food scraps. Spread evenly. Chop whole food like onions into 1"-2" cubes. Generously water. b. Browns: Cover greens completely with a thin layer of straw (no clumps!), or fallen leaves. Generously water this layer. c. Greens: Repeat the green layer as above; use alternative greens if you have them such as spent beer grains or coffee grounds. Generously water this layer. d. Browns: Add a thin layer of semi decayed leaves. Generously water this layer e. Greens Add food scrap layer as above. Generously water this layer f. Browns: Using a pitchfork, add a layer of older, more decayed leaves. Generously water this layer. g. Greens Add remainder in a thin layer. Generously water this layer

- h. **Browns:** Add the wood shavings or finely broken-down leaves. This layer should consist of browns with a finer particle size. Generously water this layer.
4. Blend compost and garden soil together, then use this soil blend to create a 6" cap on the top and sides of the lasagna trapezoid you just built so that the inner layers are not exposed (think of this as VERY thick icing on the cake). Generously water. Gently tamp down the bed in the shape of a trapezoid with a flat plateau on top.
 5. Sow seeds onto the top plateau in one, two or three rows, according to what seeds you are planting.
 6. Ensure that seeds planted are labeled with small wooden stakes.
 7. Water regularly and reshape the bed into a trapezoid weekly for ~3 months, as the decomposition of the materials will contort the bed. Add irrigation lines if possible
 8. Make an ID sign and date for future users. Enjoy your new garden bed that will be nutritious for growing plants and vegetables!

FAQs	
Why make a lasagna bed?	<p>To "build" soil on top of existing soil that may not have ideal growing conditions, such as compacted or nutrient-poor soils. You can grow plants right into the lasagna bed. As the organic matter decomposes, it releases nitrogen which becomes available to the plants' root systems.</p> <p>It is also a way to incorporate "bin #2" aged materials and make room in your compost system. The decomposing material can be used in the bed before becoming fully mature compost. The material will break down over a year's time and the "fresh" nitrogen will be available for crops without burning the roots. This method is good for plants that have a high nitrogen requirement - many annual vegetables fall into his category.</p>
What's the purpose of the landscape fabric?	<p>Creating a barrier under the lasagna bed with landscape fabric can prevent invasive weeds such as mugwort from getting into your new growing beds, as well as prevent soil contaminated with heavy metals from entering the lasagna bed. This layer also prevents you from disturbing the soil when you turn the pile - you will see it when you are tilling it next year. Landscape fabric is permeable, meaning it allows air and excess water to flow to soil underneath the fabric, preventing anaerobic soil conditions.</p> <p>It will allow the moisture levels and weather conditions to positively affect the soil above the fabric - more than if the growing bed was situated on asphalt.</p>
Will this prevent heavy metals below the pile from entering the compost bed?	<p>If you know there are heavy metals in the existing soil, start with a layer of landscape fabric so you don't disturb the soil when turning the pile. Try not to puncture the landscape fabric to ensure that a barrier remains.</p>
Can I use fresh food scraps?	<p>This composting technique does allow you to use nitrogen-rich food scraps in a semi decomposed state. The materials should be processed for at least 8-12 weeks in a compost bin (a "bin #2" state of decomposition) in order to not burn plants' roots and reduce the risk of attracting rodents.</p>
Can I use alternative materials for layers?	<p>Absolutely. Such a substitute is spent beer grain for a layer of food scrap. Try and use the pyramid concept of: larger harder to break down materials at the base and smaller "fine" carbon sources as you layer up. Your cap can include some compost as well as soil as a blend to keep this cap layer intact.</p>
Now that I've built the lasagna bed, what do I do with it?	<p>Leave it there all season long, growing one crop or more; watering it as you would any crop to decompose in place while you grow your crops. Six months to 12 months later, if you planted annuals, turn the soil in this raised bed; till the bed so that you blend all the materials. If you used it as a perennial bed, don't turn/till except to remove weeds.</p>
What does it look like when I turn it the next season?	<p>It's interesting to see what's left during the next season. A year later, for example, tape from cardboard can still be seen. When you blend a bed you can often still see a few identifiable materials such as an avocado pit, leaves and wood shavings, if you constructed the bed with thick layers. By the third year, you will not likely see any remaining layers. At this point the materials will be broken down and will look uniform.</p>
What happens if you put a big clump or thick layer of leaves, straw, several layers of cardboard, in each layer while you're building the bed?	<p>A year later, the clump is often still visible which is not desirable.</p>