



HORSE TROUGH gardening

In my lower three-acre garden, I have a troublesome wet spot. By the time it dries out enough for us to get in and cultivate it in the late spring, it's already full of weeds, so I knew I needed to come up with some sort of raised-bed system. I thought about wooden beds, but that

isn't very permanent. They rot within a few years and then you have a mess. I pondered concrete or cinderblock beds, but that takes up a lot of room, not to mention disruption of the soil in order to pour proper concrete footings. I was filling my cow's water trough when the idea hit me—horse trough gardening! I've experimented with almost every kind of container garden over the years, but the File Box Vegetable Garden featured in my "She's a Keeper" May/June/July 2008 issue has been by far the most successful of all my attempts. Because the bottom layer is a water reservoir, the roots don't end up compacted and the soil doesn't really need to drain. The concept is a cross between a hydroponic garden and a soil garden.

For my trough idea, I researched the possible toxicity and endurance of the plastic plumbing parts I would need: PVC and polypropylene. I didn't want to use a metal screen because of the rust that would ensue and the fact that I wanted my beds to last "forever." I wanted to be able to fill the bottom reservoir easily and I wanted to make a soil mix that would NEVER compact. After I did all my homework, I was so convinced my idea would be fabulous, I special-ordered 40 2' x 2' x 6' galvanized round-end stock tanks, plus one 2' high, 6' diameter round one for an herb garden. Here's the funny part: I remember once reading about Martha Stewart's favorite garden tool. It was a dainty little handheld hoe, and I thought at the time, wow, I use BIG shovels, KILLER sharpened hoes, and LIFE-THREATENING machete-type tools for my gardening—nothing dainty, for goodness sake. Well, guess what? I can garden now without bending over and I use dainty little tools to weed and plant. And I've finally outsmarted the rabbits that love to nibble on all my veggies and chew holes in my hoses. (Seriously, they do that.)



First, I put down a felt weed barrier ("Plum-Easy" June/July 2009 issue), then straw, then a bit of gravel underneath some recycled fiberglass bakery trays that I scrounged years ago when I was going to be a wheat-grass farmer, then my 40 water troughs. Voila—gardening for me has never been easier!



1. You can rest your galvanized horse troughs on the ground, but I chose to place mine on top of some large upside-down fiberglass bakery trays I scrounged years ago. Even though the tanks are galvanized, they will rust if you put them on a surface that stays constantly wet. If you need to put something under the troughs to level them, think gravel—the smoother or more round the gravel is, the better.



2. Your tank will come with one drain hole—keep that plugged until winter, when you'll take it out to prevent rain water from filling up the lower water reservoir and then freezing and possibly buckling the bottom. But you will need to **drill one ½" hole 4½" up from the bottom** on the end where you plan to put your filler pipe, Step 5. (The section of 4" drain pipe pictured here is discussed in Step 3.)



3. You'll need something to hold up the "screen" that will allow the water from the reservoir to wick upwards into the soil to keep it wet and free of compaction. I used **4" diameter rigid PVC perforated sewer drain pipe cut into 4" lengths**. These stand vertically on the tank bottom to support the "screen" that will be the soil floor. NOTE: In the beginning of your growing season, you'll need to gently water from the top until the plant roots figure out how to seek the water in the bottom of your trough and the wicking process gets established. Once the plants sprout, mulching with straw or grass clippings is a good idea.



HORSE TROUGH SOIL MIX

Each tank will take about 16 cubic feet of soil mix (approximately five wheelbarrow loads). My recipe was one-third #2 vermiculite (asbestos-free), one-third peat moss, and one-third compost/soil (screened if necessary). I mixed all three in a wheelbarrow and then shoveled it into each trough. Once the troughs are filled with such rich, aerated, good soil, all I have to do at the end of the season is pull out the plants, put some manure compost on top, pull the drain plug, and I'll be good to go until the spring when I'll plant them again. I can also feed my trough gardens during the growing season with a mild manure tea or liquid seaweed fertilizer by pouring it down the filler pipe.



4. The **screen** is $\frac{3}{16}$ " thick rigid polypropylene with $\frac{3}{16}$ " diameter holes on $\frac{5}{16}$ " staggered centers. The material comes shipped in 4' x 8' sheets just like plywood. I purchased mine from www.ametco.com, 800-321-7042 (this same material can be obtained from other sources at smaller sizes, but at a higher cost). To cut the screen the exact size of my troughs, I used a jigsaw. My troughs arrived nested two together, so one was slightly smaller than the other. They were both roughly 24" deep, but one measured 22" x 67" and the other was 24" x 69". Both ends were semicircular. It's best to make a template out of cardboard. Once the oval shape was transferred from my cardboard template, I cut the screen with the jigsaw, including a $\frac{1}{2}$ " hole cut on one end close to the edge to allow for placement of the filler pipe.



5. The **24" filler pipe** ($\frac{1}{2}$ " PVC) allows you to stick a hose into it to fill the reservoir in the bottom of the trough. You fill it until water starts to come out the $\frac{1}{2}$ " hole that you drilled in Step 2. In order for the filler pipe to quickly drain into the bottom of the trough, cut the bottom end at a 45° angle. Water routinely up to the level of the drain hole.



hay or straw?

There's one thing you should know to qualify for farmgirl status, and that's the difference between hay and straw. Hay is packed with protein. An animal can live on it. Straw is lighter than hay. It's merely the stalk of the plant and doesn't include the nutritious top. But once you get your garden growing, straw mulch is indispensable, and for farm animals, straw bedding is essential.



HORSE TROUGH gardening

UPDATE #1:

In just one month, my horse troughs are bursting with vegetables and herbs!



NOTE :

If you want to be double sure your water wicks up into the soil body quickly and efficiently, you can add five “soil legs” by cutting five 4¼" wide holes in your plastic perforated bottom. Into the holes, insert a piece of 4" tubing that is 6" in length in which you've drilled a couple dozen ¼" holes.

UPDATE # 2 :

And at two months, it's a bumper crop—and not a weed in sight! Here and on the following pages are my horse-trough gardens in mid-August.







