

Bless that Hard Pan!
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Earlier this year when the rains were still falling, our propane delivery guy turned around on the flat area next to our driveway. He backed up, pulled forward, and a geyser erupted behind him! The weight of his truck broke a water line that feeds part of our irrigation system. Luckily, we were home and shut off that water before all 2500 gallons pumped to nowhere, and the company fixed the line that afternoon.

Fast forward to August. We were having some excavation and construction done on our property and there were lots of big trucks moving around. These were very heavy trucks loaded with cement and others hauling backhoes. They turned around; we held our collective breath. Nothing, no eruptions, no sign of water, safe!

What was the difference? It's both the blessing and the curse of our foothill summers – hardpan. Known in the local parlance as the summer version of Sierra cement (or more appropriately, concrete), the clay soil that hardens to something just shy of rock can both discourage the gardener and offer an opportunity to work on projects that would be impossible when the ground is soft.

On our recent site work, a backhoe hit a particularly bad patch and the crew came back the next day with a different piece of equipment, needing to just about drill the stuff out. A couple of days later, with the work site quiet of construction noise and vibrations, I watched gophers pop through that same area. You have to appreciate the strength and determination of the little buggers. Somehow, they are able to burrow through the same hard pan that I was struggling to dig with a trenching shovel, breaker bar, and a whole lot of back!

Hardpan can be a blessing. Hear me out! During the dry summer months, heavy trucks can move across my property with ease. This same ground will swallow my shoes as I walk across it during the rainy season.

When hard, this soil can also stabilize tricky excavation work. If you are cutting a hillside and need time to establish a retaining wall, summer is the time to do it. Yes, it is harder to break up during that time, but you can say with confidence that the hard pan isn't going anywhere until the rains come!

The flip side of this, of course, is the fact that it's so difficult to dig in the summer. On our property, much of the topsoil appears to have been scraped away to build the house. We have lots of rock and lots of hardpan, in precisely the places where we would like to put planting beds and irrigation lines.

We have learned to work, and work successfully, with hardpan. If you can't afford a backhoe or excavator to dig for you, here are some tips on tools to break up that Sierra concrete. These are our essentials!

- Trenching shovel – Unlike the wider blade shovels which can move a lot of dirt, trenching shovels have blades that are narrow in width with a slight V in the center and a sharper end. (Keeping it honed helps!) It seems to break up hardpan more easily than wider blade shovels. My husband particularly likes it because the amount of dirt it carries doesn't stress his back.
- Mattock or pick ax – When you are breaking up areas that are particularly stubborn, wielding a mattock or pick ax is a great way to control your work. I prefer the smaller mattock because it is lighter, easy to handle with my computer-fatigued wrists. My husband likes the heavier pick ax because its pointed and flat blades bite into the soil more effectively for him.
- Breaker bar – This long piece of heavy metal typically has a point at one end and a flat blade at the other. The idea is to let the bar do the work, so you drop it, with whichever point facing down seems to work for the soil conditions. With a twist, it breaks the soil apart. Be careful trying this around pipes, though – it can break them too!
- Mini jackhammer – Our excavation crew used one of these and we became big fans. Usually the jackhammer weighs about 30 pounds, and with a spade attachment on the end, it makes short work of difficult hardpan. Most of the equipment rental yards in our area carry them and 24 hours seems to run about \$60-80.
- Auger bit – We have a power take-off on our tractor and the auger bit that runs off it is terrific for postholes and other deep drilling projects. There are also freestanding augers you can rent, usually recommended for two people because they can be very powerful and run a single person down the road! An auger is a great way to drill lots of holes, such as preparing an orchard for planting.
- Water – When I have a large trenching project through hardpan, I dig a little, water a little, dig some more, and water a lot. The water will be slow to seep in but as you will recall, it will also loosen the hardpan, making it much easier to remove. It's nature at its finest. This just requires a lot of patience!

Perhaps the most important thing to remember with hardpan is that digging through it will take twice as long as you estimate and be at least twice as hard to do! Using the right tools and techniques will make the job easier. And if you don't want the physical stress or your project isn't urgent, remember that the rainy season, when this Sierra cement turns to pliable and easy to dig soft clay, is just around the corner!

Tomorrow, Saturday, September 11, UCCE El Dorado County Master Gardeners will be presenting “Shade Gardening.” The class is offered at no charge and starts at 9 a.m. It will be held in the Veterans Memorial Building at 130 Placerville Dr. in Placerville. Master Gardeners are available to answer home gardening questions Tuesday through Friday, 9 a.m. to noon, by calling (530) 621-5512. Walk-ins are welcome. The office is located at 311 Fair Lane in Placerville. For more information about our public education classes and activities, go to our Master Gardener website at http://ceeldorado.ucdavis.edu/Master_Gardener/.

Fall is one of the best times of year to plant many perennials. If you are looking for additions to your garden, the UCCE El Dorado County Master Gardeners will have hundreds of different plants available for sale on Saturday, September 18th, in the parking lot of the Veterans Memorial Building at 130 Placerville Drive in Placerville. Do you have hand tools (pruners, small hand held saws, trowels, and shovels, etc.) that need sharpening? If so, bring them to the plant sale and we’ll sharpen them up for a nominal charge per tool. The sale starts at 8 a.m. All proceeds from the sale will benefit our educational outreach programs and the construction of the future Master Gardener Demonstration Garden.