

Hugel What??



Starting a hugel bed: Janan Scott, in yellow, and volunteers build a hügelkultur bed by placing woody material at the base.

Hugel bed year 2: The hügelkultur method helps build up the soil in just two years.

Slope before: Soil building was needed for this rocky slope.

Slope after: A few years after installing hügelkultur mounds, the soil settled and was planted.

Photo credit: Janan Scott

By Janan Scott

I first learned about hügelkultur (translated from German as “hill culture” or “mound culture”) several years ago from my first gardening mentor in Flagstaff, Nichole Gregory. I had recently taken over stewardship of the neglected campus garden at Coconino Community College (CCC) when she became a new employee. Her biography noted she was a Coconino Master Gardener, so I quickly introduced myself and asked if she would like to partner up on reinvigorating the space.

The garden was located on a sunny slope and was completely covered with invasive weeds. Once we got the weeds under control, we set to work on establishing our first bed. The idea was simple enough – dig out a 4’ x 4’ bed, fill it back in with amended soil, and start planting. We dug, and we dug, and we dug. It took three hours to remove a bed full of rocks and there wasn’t even enough soil to amend. We realized we’d need to change our game plan if we wanted to save our backs. That’s when Nichole asked, “Have you ever heard of hügelkultur?”

Originating in eastern Europe and Germany, hügelkultur is a centuries-old method of building up moisture-retaining and nutritious soil. The traditional process of creating a hügelkultur bed includes digging out a shallow pit (roughly a foot deep and at least 4' x 4' wide), moving the topsoil to the side, filling the base of the pit with old logs (avoid using wood that is slow to rot like cedar or that releases toxins that inhibit plant growth such as black walnut), then topping the logs with lasagna-style layers of manure, smaller branches and twigs, compost, grass clippings and leaves, and finally the original topsoil and a layer of mulch such as wood chips.

The finished mound should be anywhere from 3' to 6' high. (Don't worry – it will settle considerably over time!) Water the mound well and fill in any gaps with more manure and wood chips. The ideal time to start a hügelkultur bed is in the fall so the mound can settle over winter and be ready to plant by spring. Thoroughly water the mound once a month if there's been no precipitation. The mound will continue to settle for the first year, so it is advised to only plant shallow-rooted annuals at the beginning. After a year or two, you can begin planting deeper rooted plants like shrubs.

The beauty of the hügelkultur method is that you can adjust it to fit your needs as long as the base process is the same. For instance, at the CCC garden, digging a shallow pit wasn't in the cards because of the rocky terrain. Instead, we laid the first layer of logs directly over the earth and built up the lasagna layers from there. Instead of leaving the beds as free-standing mounds, we lined the perimeter of the beds with rocks to establish contained growing areas.

As the logs at the base of the mound slowly decay, they become like sponges which help the bed retain moisture, leading to reduced watering needs over time. This not only benefits the plants growing in the bed, but it also creates an ecosystem of beneficial microbes, fungi, insects, and worms which, in turn, slowly releases nutrients. For all the benefits of the hügelkultur method, there are some challenges to consider and plan for. First, moist, decomposing logs can attract termites (they assist in the decomposition of dead trees in nature, after all), so hügelkultur beds should be located at least 30 feet from your house. If you don't have the space, you can use smaller branches and wood chips at the base of the mound instead of logs, as termites are generally less interested in that environment. (Woody material, including wood chips, should be spaced at least one foot from your house). Second, as the logs decompose, they pull nitrogen from the bed, which can adversely affect nitrogen-loving plants you are trying to grow. Combat this by adding a thick layer of manure (heavy in nitrogen) directly over the logs. You may also consider planting legumes in the bed the first year, as they give nitrogen back to the soil. As the mound continues to settle, keep feeding the soil with lasagna layering of manure, compost, and mulch each fall. Flagstaff might not have the best soil for gardening, but the hügelkultur method has become my tried-and-true way of creating my own!

Janan Scott is a Coconino Master Gardener residing, and gardening, in Flagstaff, Arizona. Her favorite genus of flower is the *Penstemon* and she has a soft spot for paper wasps.