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Drill baby, drill

Peninsula Permaculture · March 24, 2022



By Alex Féthière



Driveway daikon shouldn't be eaten, but slows runoff while preparing the soil for some ornamentals. *(Alex Féthière)*

Clay soil is commonplace in Mason County. I've got various mixtures from almost soil to practically pottery.

People put a lot of effort into fluffing up that clay soil for planting purposes. Introducing air and organic matter can lighten some of that impermeability and compaction.

Tilling clay contributes to hardpan formation, and manually busting it up is a daunting prospect. I've bent a homemade broadfork almost beyond operability on Harstine Island clays.

Working the clay on a broadacre scale is not an option for those without access to tractors and appropriate attachments. As such, many people starting out in permaculture enlist the aid of rooting vegetables to loosen and amend their soil with "biodrilling." This process may be time-consuming, but confers lasting benefits.

Daikon radish is the biodrill par excellence. Depending on the cultivar, it is capable of boring several feet, even into subsoil. Like other plants (think maple, dandelion and burdock) that "mine" minerals from subsoil, it contains a notable amount of calcium, as well as potassium and vitamin C.

Soils at up to 300 pounds per square inch of compaction, as measured with a penetrometer, are good candidates for biodrilling with daikon. Considering that most roots' burrowing powers tap out at 150 psi, daikon excels at building and retaining all kinds of soil in preparation for less boring crops.

That soil will be richer and lighter when the daikon dies back. Left unharvested, the massive taproot rots, often leaving behind a channel that's already colonized with microorganisms that thrived in the root zone of the daikon.

These microorganisms, attracted to the exudates that the daikon released in life, continue to break it down in death as nutrient cycling proceeds. One study found almost over one and a half tons of organic matter added per acre by close planting of daikon - at least five per square foot, arranged like fives on dice. This is in addition to 4 tons per acre of biomass from the greens, flowers and pods above ground!

The speedy greens will shade out weeds and protect the soil from rain impact, which is why daikon is great to grow over winter. When frost wilts the leaves they will mulch the soil and shroud the taproot from the worst of the cold.

I've planted it in spring and fall; the picture above is of a daikon planted in spring as part of a seed mix for chickens. Last winter killed everything but the daikon, despite temperatures as low as 13 degrees Fahrenheit.

I'm happy to let it reseed in that spot because nothing else can grow there, which is a stark contrast to the daikon I fall-planted in a raised bed for eating. The raised-bed daikon is a fat, pampered root that pushed itself out of the soil.

Farmers know it as a winter cover crop that salvages leftover nitrogen from crops like wheat and corn. Research found daikon recycled nitrogen at 140-170 pounds per acre, and this is released when the root dies.

All this should be enough reason to grow daikon, but furthermore, all parts are delicious! As with other brassicas, the flowerheads can be munched as a spicy snack, and the pods are crunchy and hot like vegetal embers. (Some radishes, like "rat-tail" varieties, are bred for the most delectable pods.) The leaves make a fine cooked green or salad component, and the root can be grated, pickled or grilled.

Cultivars exhibit varying levels of spiciness, which varies from the mustard-oil burn of horseradish to just a note of zing. Peeling is said to dull the bite, but I can't confirm that because I like that fire in my radish kimchi.

■ *Alex Féthière has lived on Harstine Island long enough to forget New York City, where he built community gardens and double-dug his suburban sod into a victory garden. He can be reached at onlandist@gmail.com.*

Originally published in the Shelton-Mason County Journal, March 24, 2022: <https://www.masoncounty.com/story/2022/03/24/news/drill-baby-drill/978.html>

Text from the Internet Archive copy captured March 24, 2022: <https://web.archive.org/web/20220324220415/https://www.masoncounty.com/story/2022/03/24/news/drill-baby-drill/978.html>