

For Peat's Sake

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By Melanie Lenart

When I first started gardening a few years ago, it seemed natural to pick up a bag of potting soil to get my basil and oregano plants off to a good start.

But as I was carefully crumbling the rich, airy soil from that automatic purchase, reality pricked at my conscience. This was peat fraying in my hands. This carbon-rich substrate didn't belong in a pot in arid Tucson. It belonged in the peat swamps that created it – probably in Canada or Alaska – where it could continue to grow, taking up heat-trapping carbon dioxide in the process.

The importance of leaving peat swamps in place came home to me again while listening to University of Arizona fire ecologist Thomas Swetnam talk in November about this summer's fires around Moscow. While Moscow baked under the kind of stagnant heat typical of June in the Southwest, acrid smoke permeated the city. The ground-hugging smoke came from a nearby source – pockets of underground peat smoldering like giant cigarette butts.

Bad luck? Not exclusively. The area under fire involved peat swamps that had been deliberately drained. Soviet era plans to harvest the peat for fuel were later abandoned, but the damage had been done. Meanwhile, the high cost of rewetting the swamps had relegated that plan to the back burner.

This seemingly far-off problem actually affects us all. Scientists have long pointed to the world's peat as a potential game-changer in future climate. Rising temperatures could thaw and dry northern peat swamps, spurring them to release massive amounts of carbon dioxide and other greenhouse gases. Not good for global temperatures.

Once peat dries out – whether from rising temperatures, falling water tables or draining for peat harvesting – oxygen can rejoin with its carbon to form carbon dioxide. Fire merely speeds up the process.

While southwesterners can do little to prevent Russian fields of peat from going up in smoke, we do have the option of shunning commercial potting soils. The "sphagnum moss" in these bags is another way of saying northern peat.

So the next time you're tempted to reach for a bag of sphag to bolster the winter lettuce, think instead about how Nature labors to turn a pile of leaves and roots into carbon-rich soil that plants love. Then, remember that there's no such thing as too many cooks when it comes to stewing up carbon-rich soil.

Nature's recipe is simple: Stack vegetable matter from dead plants and nearby leaves in the ground and moisten it often. Once the soil measures about half carbon when dry, it qualifies as peat.

To speed up the soil-enrichment process to human time frames, add water almost daily, and stir frequently. Freshen the pile with vegetable matter as kitchen scraps accumulate and leaves fall. (Avoid dairy, meat and leaves from poisonous plants such as oleander.) For a cooking pit, use any place you can turn soil, including a hole in the ground.

Once you've added all the ingredients, let the compost concoction simmer for a month or two (still turning the soil) before serving up a nourishing substrate for plants.

This is something you can try at home. In our front-yard composting pit, the soil darkened over the months as the carbon from decaying vegetables and vegetation built up. By the time we planted a couple of trees in front of our property last year, it looked ripe enough to serve as a peat substitute. Apparently it worked – the trees we planted are alive and thriving. Tangerines dangle from the branches of one.

If, like Sunkist, we were going to put labels on our tangerines, they would read: No peat was harmed in the making of this fruit.

Author: Melanie Lenart is an environmental scientist and writer, and the author of Life in the Hothouse: How a Living Planet Survives Climate Change. For more on making compost, see her blog on our website: www.thenewsouthwest.com then click on Blogs, Melanie Lenart.