



Get the Lead Out

Published April 8, 2010

The Day, New London, CT

By Suzanne Thompson

I want to be gardening. Apparently I should have planted a rice paddy, not peas for St. Patrick's Day, in advance of last week's two-day rain-out. At the very least, my mulch pile didn't float away in last week's floodwaters.

As I console myself with doting over seedlings indoors, I remember that I forgot to get my soil tested. Good thing I dug up some samples that one balmy weekend in March.

There's still time for us procrastinators, according to Dawn Pettinelli, who heads up UConn's Soil Nutrient Analysis Laboratory in Storrs. The lab performs a variety of soil tests for commercial growers and home gardeners year-round. It makes sense to spend about \$10 every few years to check the acidity (soil pH); available plant nutrients nitrogen, phosphorous and potassium (N-P-K), calcium, magnesium, and micro-nutrients; and get a quick screening for lead.

Few of us old gardening hacks stop to think about testing for lead, which the U.S. Environmental Protection Agency considers the number-one environmental health threat to children in this county. After all, we've been killing off our crops for years, so we must know everything. But if you have small children or are new to vegetable gardening, put your mind at ease by reading UConn's four-page fact sheet, "Lead in Garden Soils," and get your soil tested.

"Finding an elevated lead level in your garden soil isn't as uncommon as people think," says Pettinelli, a soils scientist, noting that about 13 to 20 percent of the lab's soil analyses in the past few years have turned up an elevated estimate of total lead.

Lead is a naturally occurring element, so don't fret if some is detected. Anything up to 60 parts per million (ppm) is normal, Pettinelli says. Some varieties of vegetables and herbs can be still be grown in soils that clock in at 100 to 400 ppm, which are considered moderately contaminated, but UConn recommends keeping kids out of the bare soil and avoiding bringing it indoors on clothing or shoes. UConn recommends that areas testing higher than 400 ppm not be used for edible crops, but ornamentals can still be grown in them. Again, keep the kids out of that dirt.

UConn's test is only an estimate of total lead, Pettinelli points out. If your reading is 400 ppm or higher, seek more information about testing and soil remediation, removal, or barriers.

If you have moderately elevated levels, look around for potential causes. Relocating your garden may be the simple solution. That's because lead, a mineral that doesn't decompose, also isn't very mobile. Lead particulates tend to stick to the soil they land on. It's when we start moving around the soil that problems arise.

Although lead antiknock fuel additives were banned in the U.S. in 1991, there's still plenty of them deposited along roadsides. Don't plan to garden close to the road or cart in composted leaves from along roadways.

Lead paints were banned for use on homes in 1978; if you have buildings painted before then—and who doesn't in New England?—odds are that soil closest to the building, especially around the dripline, will be contaminated. So avoid those areas, too. Don't site your compost bin so that it collects runoff from that building, either.

Lead arsenate also was a common pesticide in fruit orchards from the 1800s up to the 1950s. Many a New England suburb has been plopped on an old fruit orchard. If your elevated readings are showing up in the middle the yard, away from roads and buildings, that could be the cause. Unless disturbed, most lead deposited by sprays, paint, or road emissions will stay concentrated in the top few inches, according to UConn. Raised beds, with new soil, or container gardens, may be your solution.

For more information, go to the UConn Soil Nutrient Analysis Lab website, www.cag.uconn.edu/plsc/soiltest, and look for fact sheets; or call 860-486-4274 or the UConn Home and Garden Education Center at 877-486-6271.

Suzanne Thompson's "CT Outdoors" column was selected best agriculture-related series in a weekly newspaper in 2009 by the Connecticut Agricultural Information Council. Catch her weekly radio show on WLIS 1420 AM and WMRD 1150 AM on Tuesdays from 12:30 to 1 p.m. or Sundays from 7 to 7:30 a.m.