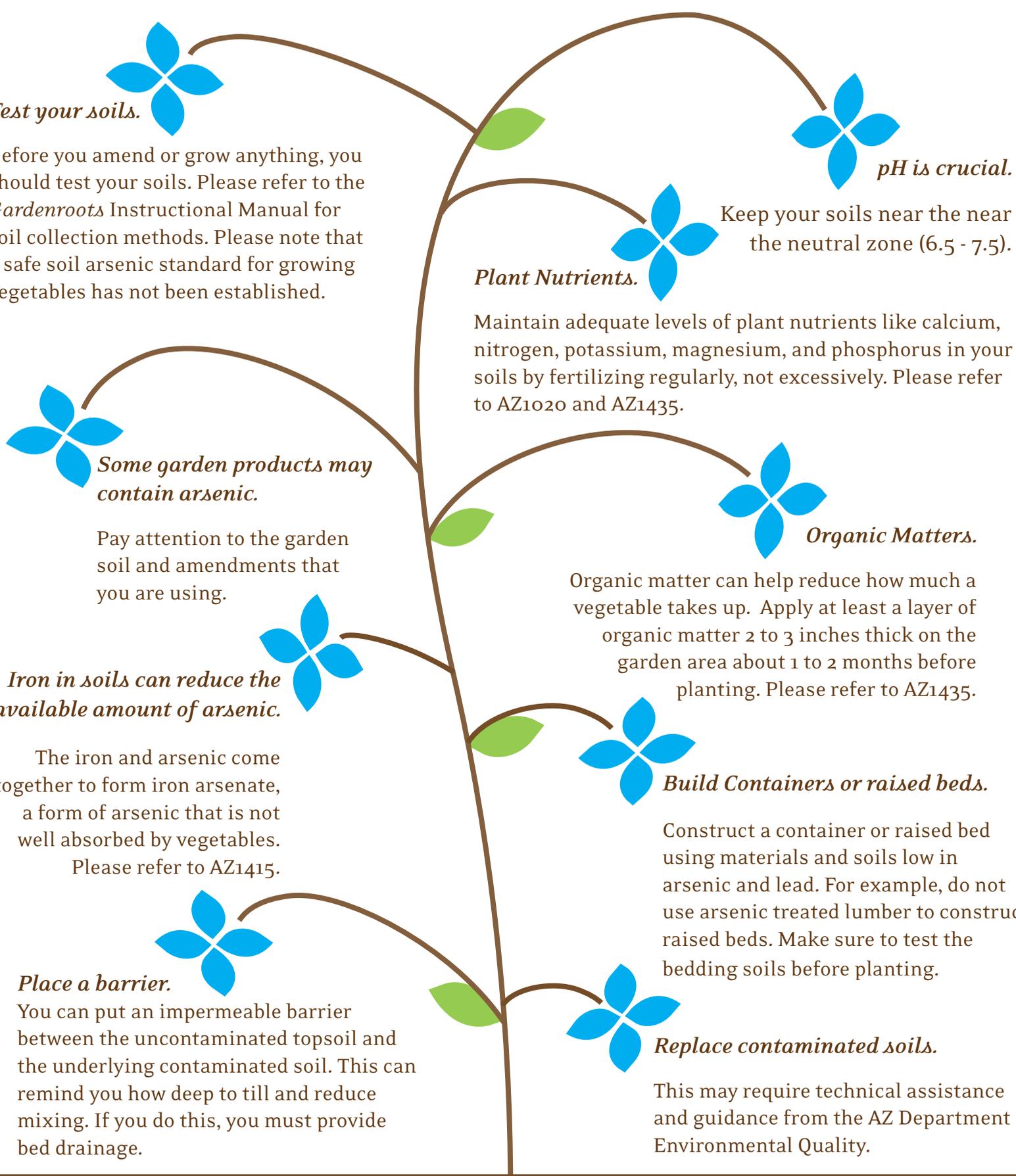


Garden Preparation: Ways to Reduce Arsenic Absorption by Vegetables



Test your soils.

Before you amend or grow anything, you should test your soils. Please refer to the *Gardenroots* Instructional Manual for soil collection methods. Please note that a safe soil arsenic standard for growing vegetables has not been established.

pH is crucial.

Keep your soils near the near the neutral zone (6.5 - 7.5).

Plant Nutrients.

Maintain adequate levels of plant nutrients like calcium, nitrogen, potassium, magnesium, and phosphorus in your soils by fertilizing regularly, not excessively. Please refer to AZ1020 and AZ1435.

Some garden products may contain arsenic.

Pay attention to the garden soil and amendments that you are using.

Organic Matters.

Organic matter can help reduce how much a vegetable takes up. Apply at least a layer of organic matter 2 to 3 inches thick on the garden area about 1 to 2 months before planting. Please refer to AZ1435.

Iron in soils can reduce the available amount of arsenic.

The iron and arsenic come together to form iron arsenate, a form of arsenic that is not well absorbed by vegetables. Please refer to AZ1415.

Build Containers or raised beds.

Construct a container or raised bed using materials and soils low in arsenic and lead. For example, do not use arsenic treated lumber to construct raised beds. Make sure to test the bedding soils before planting.

Place a barrier.

You can put an impermeable barrier between the uncontaminated topsoil and the underlying contaminated soil. This can remind you how deep to till and reduce mixing. If you do this, you must provide bed drainage.

Replace contaminated soils.

This may require technical assistance and guidance from the AZ Department of Environmental Quality.

Arsenic and lead occur naturally in soils. It is impossible to grow plants completely free of arsenic and lead, but there are ways to reduce the amount that is available to, and taken up by your vegetables. Above are important recommended practices.

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