



# *gardenroots*

*The Apache County Garden Project*

Gardenroots was designed in response to your research interests.

### *Drop Samples off at the Apache County Cooperative Extension Office*

845 W 4th North Apache County Fairgrounds  
St. Johns AZ 85936  
Hours: Monday - Friday, 8AM - 5PM  
Telephone: 928-337-2267

### *Gardenroots Contacts*

#### **General Project and Sample Collection Questions:**

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#### **Sample Drop-Off Concerns or Questions:**

• Mike Hauser, mhauser@ag.arizona.edu, 928-337-2267

### *Resources - University of Arizona*

#### **Cooperative Extension - Apache County**

• <https://extension.arizona.edu/apache>

#### **Department of Soil, Water and Environmental Science**

• <http://swes.cals.arizona.edu/>



### **What is Citizen Science?**

Citizen Science can be defined as intentional collaborations in which members of the public engage in the process of research to generate new science-based knowledge.

This is a partnership between the University of Arizona's Apache County Cooperative Extension and Phyto-Environmental Health Laboratory.

This manual provides step-by-step instructions on how to collect water, soil, dust and vegetable samples from your garden for analysis by University of Arizona laboratories.

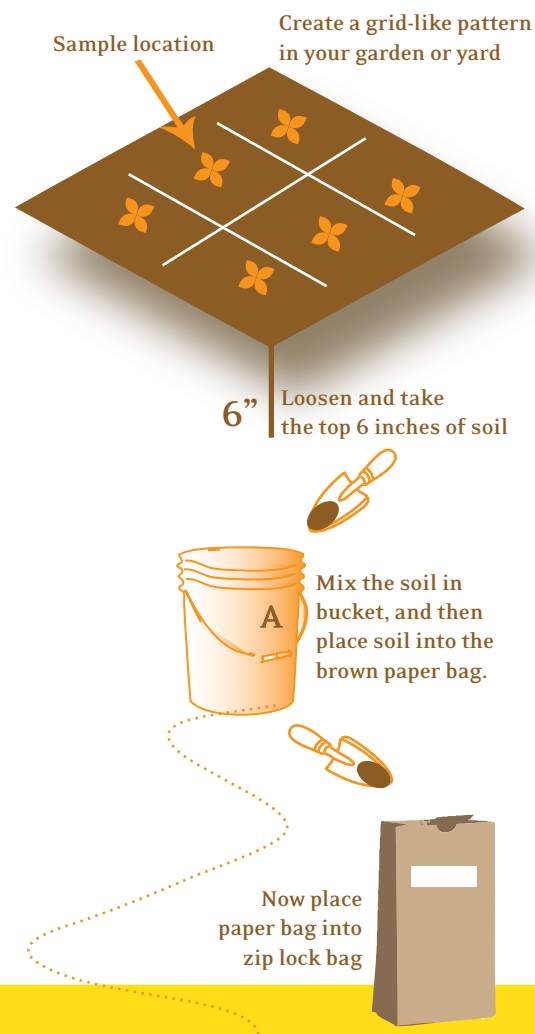
Gardenroots: The Greenlee County Garden Project was made possible by:



Instruction  
Manual

## A. Collecting Soil Samples from your Garden

1. Select 6 spots to sample in your garden in a roughly grid-like pattern.
2. Using the hand trowel provided, loosen the top 6 inches (the approximate length of the hand trowel blade) of each of the 6 soil spots.
3. At each location, take one full scoop of soil and place it into the 2-gallon bucket labeled Bucket A.
4. Mix the six soil samples thoroughly inside the bucket. This process is called sample bulking.
5. Fill the bag with the bulked soil sample to the line drawn on the outside of the bag.
6. Place the soil paper bag into the 1-gallon Ziploc bag making sure that the label on the brown paper bag is clearly visible.
7. Soils should be kept refrigerated until you are ready to drop-off at the County Extension Office.

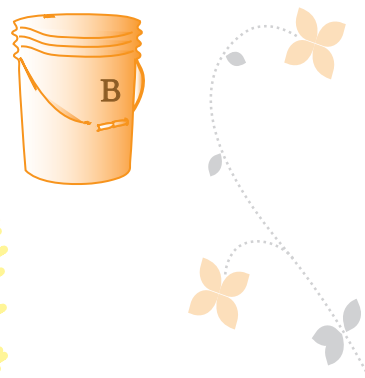


## B. Collecting Soil Samples from your Yard

You will do the same soil sampling process as you did above for you garden soil, but now for your yard soil. Yard soil means unamended and native soil located on your residential property. Complete steps 1-7 above, note for step 3 you will now use the 2-gallon bucket labeled Bucket B.

### Drop-Off Checklist:

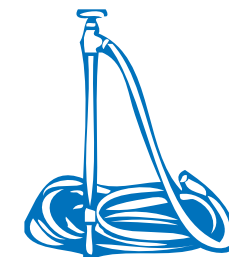
- Garden soil sample in paper bag and then 1-gallon Ziploc bag
- Yard soil sample in paper bag and then 1-gallon Ziploc bag
- 3 water sample bottles in a 1-gallon Ziploc bag
- 4 Vegetable samples individually bagged in separate 1-gallon Ziploc bags
- 2 Leaf samples individually bagged in separate 1-gallon Ziploc bags
- Drop off all samples at the Cooperative Extension Office, address on back



## C. Collecting Water Samples (preferably in the late afternoon)

### Using the water source you use to irrigate your garden:

1. Turn on the water and allow the water to flow for 2-3 minutes. During this you may fill out the labels of the bottles with all the information requested.
2. Slow the flow to a small trickle and carefully fill each bottle until water overflows.
3. Once full quickly cap each bottle and seal.
4. Place the 3 bottles in the 1-gallon Ziploc bag, seal, and store in a refrigerator until you are ready to drop off at the County Extension Office. **Please do NOT freeze water samples.**



## D. Collecting Vegetable Samples

Please collect a total of 4 plant samples. It is recommended to collect a combination of leafy, root, fruiting, and/or legumes such as: kale, collards, spinach, lettuce, green beans, radish, turnip, peppers, and/or tomatoes.

1. Place each vegetable sample in separate Ziploc bag to the line drawn on the outside of the bag and remove all air from bag before sealing.
2. Fill out the labels for each vegetable with all the information requested.
3. Promptly place the bag in the refrigerator until you are ready to drop off at the County Extension Office.

## E. Collecting Leaves for Dust Samples

Please collect a total of two different plant leaf samples. Collect leaves that are parallel to the ground, located on the upper portion of the plant, and do not touch the ground.

1. Collect 5 leaves from either a leafy vegetable and/or an ornamental plant in your garden.
2. Place each set of 5-leaf samples in separate Ziploc bags and remove all air from bag before sealing.
3. Fill out the labels with all the information requested.
4. Promptly place the bag in the refrigerator until you are ready to drop off at the County Extension Office.



Collect leaves that are:

- Parallel to the ground
- On the upper portion of plant
- Not touching the ground