Groundwater can be a large source of arsenic exposure for rural families living in vulnerable communities. Recently, researchers discovered a new source of arsenic exposure to people living in rural communities. Families living in these communities are more likely to buy locally grown produce and often depend on these local fruits and vegetables. However, this locally grown produce can contain higher than normal levels of arsenic and cadmium. Being exposed to extra arsenic and cadmium can negatively impact a person’s health. Ingesting large amounts of these elements can lead to gastrointestinal issues, severe muscle cramping, and other health issues.

**Meet the Researchers:**

Dr. Monica Ramirez-Andreotta is an associate professor of Soil, Water, and Environmental Science at the University of Arizona. She is known for her work on the Gardenroots program. Gardenroots is a citizen science project where people can test arsenic levels in their homegrown vegetables. This project is important because it helps educate underserved communities about the dangers of ingesting arsenic.

Mining and oil drilling leave behind toxic waste that includes harmful levels of arsenic and cadmium. Often, people living in rural communities have no choice but to grow crops near these extraction sites. When crops are grown near the waste from the extraction site, they accumulate higher levels of arsenic and cadmium.

The goal of this study was to determine which crops carry extra arsenic and cadmium and to use this information to evaluate a child’s intake of these foods in rural communities. Researchers compiled a list of foods with high levels of arsenic and cadmium in the edible portion of the plant. The crops with the highest levels of arsenic and cadmium were cabbage, lettuce, kale, and cilantro. The full list of foods with high intake of arsenic and cadmium is included.

Families need to know which crops are dangerous to grow in contaminated soils so they can avoid excess exposure to arsenic and cadmium. They can do this by limiting their intake of these crops.

**Arsenic and Cadmium High-Intake Crops:**

Lettuce, radish, kale, broccoli, cabbage, turnip, cauliflower, papaya, spinach, swiss chard, pumpkin, squash, cucumber, garlic, onions, potato, tomatoes, eggplant, pepper, carrot, cilantro, celery, kidney beans, green beans.

Links: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7295674/> 

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From theUA Southwest Environmental Health Sciences Center, Community Engagement Core **-** [**http://swehsc.pharmacy.arizona.edu/outreach/overview**](http://swehsc.pharmacy.arizona.edu/outreach/overview)

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