

Vegetable Garden Survey

As part of the human health risk assessment (HHRA), a selection of food items grown in local gardens was collected, along with samples from surrounding soil. The purpose was to obtain Sudbury-specific data on the levels of metals found in fruit and vegetables.

Where did we sample?

Samples were collected at residential (68 sites), commercial (10 sites) and wild (17 sites) sites across the Greater Sudbury area. These sites are shown in the map below.

What did we collect?

- Where possible, we collected leafy vegetables (such as lettuce), root vegetables (such as carrots), above-ground vegetables (such as tomatoes), and fruit (such as strawberries) from each residential and commercial site.
- At the wild sites, either blueberries or mushrooms were collected.
- At each site, co-located soil samples were collected at depths of 0-15 cm and 15-30 cm.
- Vegetables and fruit were hand-picked in the same manner as gardeners would harvest them.



What was analyzed?

- The vegetables, fruit and soil were analyzed for a suite of metals
- The soil samples were analyzed for additional physical and chemical parameters

Summary of results

Some of the soils from residential gardens did contain metals. The metal levels in produce from the gardens were typically very low. This means that even though garden soils in some parts of Sudbury do have metals, these metals do not accumulate in produce to concentrations that would cause immediate human health concerns.

Metal levels in blueberries from the wild sites were very low.

The pH of soils at residential and commercial sites was typically higher than at natural or wild sites. This can be linked to normal gardening practices. In many cases, gardeners add lime to their soils, reducing its acidity and encouraging the growth of fruits and vegetables.

What did we do with the results?

Based on our findings, we do not expect any immediate health effects related to metals from eating vegetables grown in the Greater Sudbury area under normal conditions.

The SARA group summarized results for metal levels in produce and soil from all of the gardens and farms used in the study. These

results were sent to all participating landowners.

The results are currently being used as site-specific data as part of the exposure assessment for the HHRA.

