

Heavy metal contamination of Australian Urban/Peri-Urban Soils Market Garden Soils

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If we demand our produce be locally sourced, how can we be sure it is free from pollution? Urban gardens and peri-urban landscapes have long supplied produce to local communities but are the soils impacted by urban activities?

This research looks at the heavy metal concentrations across market garden areas in the greater urban NSW area. Whilst traditional agriculture has links with soil chemistry, smaller farms often do not see the benefit in the larger range of soil testing. Furthermore very little is being put into rapid assessment of pollutants to aid land users to build upon traditional soil knowledge with rapid pollutant assessment. Soil quality has often been coined “poor mans chemistry”, however as our landscapes become increasingly urban and peri-urban our understanding of soil quality needs to also evolve to include assessments of pollutant load and mobility. This research used absolute sampling techniques to provide rapid elemental breakdowns of the soils, which can guide local farmers in the crop choices. Furthermore through the mapping of these contaminant loads of varying soils in areas this can be used to forecast problem areas guiding future land use strategies for more sustainable undertakings. This will result in a better understand of our impact on the environment.

We hope to be able to provide other disciplines with information of how these environments are responding to increased pollutant loads so that land management strategies could be evolved. This research will be able to guide us down a path of sustainability by providing us with information, from which we can track, the effects we are having on soils and thus the environment.