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Topic: Law and regulation in public health nutrition

Title: The quality of vegetables produced in Cape Town in terms of their cadmium, lead and zinc concentrations

Presentation Type: Oral

Cape Town has two farming areas that are major suppliers of vegetables to local communities and beyond. Analysis of cadmium, lead and zinc concentrations in vegetables from these areas indicated that they occasionally exceeded the maximum limits set by South African regulations under Act no. 54 of 1972. The main sources of these three metals were unprocessed cattle manure and chicken manure.

Analysis of vegetable samples collected in 2000 showed that cabbage, carrots, cauliflower and lettuce exceeded maximum permitted concentrations for cadmium, lead and zinc on more than one sampling occasion. A later study in 2007 showed that the concentrations of these three metals in cabbages, cauliflower, lettuce and other vegetables were not significantly different than seen in 2000. Based on these studies it could have been concluded that vegetables from these areas are contaminated and unfit for human consumption.

When viewing the same data against recommended dietary allowances for the ideal adult diet it was concluded that vegetables from these areas are fit for human consumption. Evaluating the data against European standards also found these vegetables fit for human consumption. Deeming vegetables from these areas as unfit for human consumption based on South African regulations only could have negative effects on local markets and these farming communities if published out of context.

The importance of having internationally uniform guidelines became evident through this study. The information gathered through these studies should be disseminated with caution and are meant to inform better farming practices in Cape Town and elsewhere.