

Heavy Metals

CADMIUM

Cadmium can be present in the soil naturally, from past fertiliser applications, and from fertilisers applied for avocado growing. Cadmium is found as an impurity in phosphate fertilisers. As avocados are low phosphate foragers, the application of phosphorus is often not required, especially if levels are sufficient.

Total cadmium in soil can be tested during your annual soil test.

If elevated levels of Cadmium are present in the soil, there are some actions which can be taken to reduce the uptake into fruit. Soil type, organic matter, zinc uptake and pH are known to affect cadmium uptake.

- If phosphorus levels are sufficient, do not apply fertilisers containing P.
- Add a total Cadmium test to your annual soil test.
- Ensure zinc levels are sufficient.
- Ensure your pH is in range.

Factor	Details	Actions to take
pH	In general, as soil pH increases, Cd plant uptake decreases.	Aim for pH > 6
Zinc	Cadmium competes with Zinc for plant uptake and translocation. Alleviating Zn deficiencies or adding Zn to agricultural soils can result in reduced Cd uptake.	Ensure zinc is sufficient. If not, apply zinc in mounds or bands.
Organic Matter	In general, as soil Organic Matter increases, plant uptake of cadmium decreases. This is due to increased soil adsorption of Cd, amongst other factors.	Apply mulch or compost.

Soil type – cadmium is generally more available to plants in sandy soils, and less available in clay soils.