

Cadmi-Yum? Removing Cadmium from China's Crop Soil

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Problem

Cadmium-rich waste is in crop soil in the Guangxi Region of China. Agriculture absorbs the cadmium, and the local population eating this food is getting sick.

Short-Term Solution

Begin treatment with hyperaccumulating plants

Harvest hyperaccumulators and test the soil

Reduce the plants to cadmium rich soot

Begin planting crops for consumption

Cadmium toxicity

Research has shown that cadmium affects the developing brain in children. Here are some other parts of the body it can effect.

RELATED HEALTH ISSUES

A recent study has linked it to breast cancer.

Cardiovascular disease

Obstructive pulmonary disease

The kidneys lose function, which can also cause gout, a form of arthritis.

Bones lose density and fracture.

SOURCES: Dr. Aimin Chen; Casarett & Doull's Toxicology, (Curtis D. Klaassen); Environmental Health Perspectives, Dec. 2009

Assessment

- Take soil samples before, during, and after the treatment
- Once the soil tests show cadmium at below harmful levels, treatment can stop
- Keep statistics on the diagnoses of kidney failure and osteoporosis within the region

Hyperaccumulator

Cost

- 2% of China's Environmental Budget (Est.)
- Less farmable land during treatment periods
- Planting the hyperaccumulators
- Disposal of hyperaccumulators

Background

- The Guangxi Region has high amounts of Cadmium in the agricultural soil
- Cadmium is very toxic to humans
- Due to similar events in Toyama,
 Japan the people of Guangxi are at risk for adverse health effects

Recommendations

Policy Change

Stricter Guidelines

Enforce Policy

FAO Involvement

Assist wit

Assist with Soil Testing

Campaign For Public Support

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