

Food, Farming and Gardening Guidelines for Minimizing Dioxin Exposure

Background

Low levels of dioxins are found throughout the environment as a by-product of combustion and chemical production processes. They can be detected in air, soil, water, sediment, fish and other foods like meat and dairy products. Some dioxins may be toxic and have the ability to cause illness or adverse health effects. Michigan, in partnership with federal agencies, has been successful in dramatically reducing dioxin emissions and will continue its efforts to detect and reduce dioxin levels even further in both the environment and food. Scientific and technological improvements in lab methods have also allowed much lower detection levels of dioxins and the monitoring of dioxin levels in more foods. The goal of the Michigan Department of Agriculture (MDA) is to help ensure that consumers and the food and agricultural industries take steps to reduce unnecessary dioxin exposure by decreasing consumption of foods likely to be contaminated and by decreasing exposure to soils known to be contaminated.

Minimizing potential dioxin exposure from foods

Scientists believe that the majority of those who have been exposed to dioxins occurs via the foods they eat, especially those with high-fat content. Monitoring food intake is one important way to reduce potential exposure to dioxins. MDA recommends:

- Paying careful attention to the state's fish advisories.
- Selecting lean cuts of meats, trimming fat from meats, consuming low-fat dairy products and cooking foods in ways that decrease fat content.
- Eating moderate portions of a wide variety of foods.

Dioxins can also potentially contaminate fruits and vegetables by being deposited with airborne particles (dust) on plant surfaces or directly from contact with contaminated soil. Food testing and research studies, however, have shown that plants can only take up a small fraction of the dioxins present. MDA recommends washing and paring or peeling garden produce grown in any soils and following the below guidelines for reducing soil exposure.

Minimizing potential dioxin exposure from soils

Since dioxins can attach to soil particles and remain for long periods of time, state officials recommend the following practices for individuals working with land or soil in the Titabawassee River flood plain:

Backvard Gardening

Overall important factors to consider when determining individual gardening practices include: the level of dioxin contamination in the garden soil, the level of activity (how dirty you get) and whether young children live or play around the garden/home. To minimize soil exposure:

- Avoid having children play in soils known or suspected to contain higher levels of chemical
 contaminants and discourage them from eating dirt or putting toys or other objects in their
 mouths. Wash hands frequently if playing or working with soils.
- While gardening, do not eat unwashed produce or other foods. Do not drink, smoke or engage in other activities that may introduce soil into the mouth.
- Minimize inhalation and ingestion of airborne soil particles. Consider wearing a face mask in dusty conditions.
- Keep soil moist while gardening to control dust.
- Wash soil particles from items like clothes, gardening tools and supplies outside after each use and store outside.
- Designate certain clothing, including footwear and tight-fitting disposable gloves for gardening
 use only. Remove gardening footwear before entering the house and store all used gardening
 clothing outdoors.
- Wash all exposed body surfaces, preferably by showering, as soon as possible after gardening.

Farming

MDA recommends that farmers exercise good stewardship and implement the following practices for lands within the Titabawassee River flood plain:

- Follow the same risk reduction strategies outlined in the gardening section.
- Utilize minimum tillage and dust reduction practices in any production cycle.
- Because of individual and unique livestock production practices, and the different potential for exposure, anyone raising livestock is urged to contact MDA.

Michigan Department of Agriculture Contact: Dr. Brian Hughes, MDA Toxicologist, 517-241-3267