

66265.276 Food Chain Crops

(a)

An owner or operator of a hazardous waste land treatment facility on which food chain crops are being grown, or have been grown and will be grown in the future, shall notify the Department within 60 days after July 1, 1991.

(b)

(1) Food chain crops shall not be grown on the treated area of a hazardous waste land treatment facility unless the owner or operator can demonstrate, based on field testing, that any arsenic, lead, mercury or other constituents identified under section 66265.273(b): (A) will not be transferred to the food portion of the crop by plant uptake or direct contact, and will not otherwise be ingested by food chain animals (e.g., by grazing); or (B) will not occur in greater concentrations in the crops grown on the land treatment facility than in the same crops grown on untreated soils under similar conditions in the same region. (2) The information necessary to make the demonstration required by subsection (b)(1) of this section must be kept at the facility and must, at a minimum: (A) be based on tests for the specific waste and application rates being used at the facility; and (B) include descriptions of crop and soil characteristics, sample selection criteria, sample size determination, analytical methods and statistical procedures.

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(B)

will not occur in greater concentrations in the crops grown on the land treatment facility than in the same crops grown on untreated soils under similar conditions in the same region.

(2)

The information necessary to make the demonstration required by subsection (b)(1) of this section must be kept at the facility and must, at a minimum: (A) be based on tests for the specific waste and application rates being used at the facility; and (B) include descriptions of crop and soil characteristics, sample selection criteria, sample size determination, analytical methods and statistical procedures.

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include descriptions of crop and soil characteristics, sample selection criteria, sample size determination, analytical methods and statistical procedures.

(c)

Food chain crops shall not be grown on a land treatment facility receiving waste

only food chain crop produced is animal feed. (B) The pH of the waste and soil mixture is 6.5 or greater at the time of waste application or at the time the crop is planted, whichever occurs later and this pH level is maintained whenever food chain crops are grown. (C) There is a facility operating plan which demonstrates

how the animal feed will be distributed to preclude ingestion by humans. The facility operating plan describes the measures to be taken to safeguard against possible health hazards from cadmium entering the food chain, which may result from alternative land uses. (D) Future property owners are notified by a stipulation in the land record or property deed which states that the property has received waste at high cadmium application rates and that food chain crops must not be grown except in compliance with paragraph (c)(2) of this section.

(1)

(A) The pH of the waste and soil mixture is 6.5 or greater at the time of each waste application, except for waste containing cadmium at concentrations of 2 mg/kg (dry weight) or less. (B) The annual application of cadmium from waste does not exceed 0.5 kilograms per hectare (kg/ha) on land used for production of tobacco, leafy vegetables or root crops grown for human consumption. For other food chain crops, the annual cadmium application rate does not exceed:

Time Period	Annual Cd Application Rate (kg/ha)
Present to June 30, 1984.....	2.0
July 1, 1984 to December 31, 1986.....	1.25
Beginning January 1, 1987.....	0.5

(C) The cumulative application of cadmium from waste does not exceed the levels in either paragraph (c)(1)(C) 1. or 2. of this section.

Soil Cation Exchange Capacity (meq/100g)	Background Soil pH	Less Than 6.5	Background Soil pH Greater Than 6.5	Less than 5	5	5 to 15	Greater than 15
Less Than 5	Less Than 6.5	5	5	5	5	5	5
5 to 15	Less Than 6.5	10	10	10	10	10	10
Greater than 15	Less Than 6.5	15	15	15	15	15	15

2. For soils with a background pH of less than 6.5, the cumulative cadmium application rate does not exceed the levels below; provided, that the pH of the waste and soil mixture is adjusted to and maintained at 6.5 or greater whenever food chain crops are grown.

Soil Cation Exchange Capacity (meq/100g)	Maximum Cumulative Application (kg/ha)
Less Than 5	5
5 to 15	10
Greater than 15	15

Maximum Cumulative Application (kg/ha)	Soil Cation Exchange Capacity (meq/100g)	Background
Soil pH Less Than 6.5	Background	Soil pH Greater Than 6.5
Less than 5.....5	5	5 to 15.....510
Greater than 15.....520		

2.

For soils with a background pH of less than 6.5, the cumulative cadmium application rate does not exceed the levels below; provided, that the pH of the waste and soil mixture is adjusted to and maintained at 6.5 or greater whenever food chain crops are grown. Soil Cation Exchange

Capacity (meq/100g)	Maximum Cumulative Application (kg/ha)
Less than 5.....	5 to 15.....
10	Greater than 15.....
	20

(2)

(A) The only food chain crop produced is animal feed. (B) The pH of the waste and soil mixture is 6.5 or greater at the time of waste application or at the time the crop is planted, whichever occurs later and this pH level is maintained whenever food chain crops are grown. (C) There is a facility operating plan which demonstrates how the animal feed will be distributed to preclude ingestion by humans. The facility operating plan describes the measures to be taken to safeguard against possible health hazards from cadmium entering the food chain, which may result from alternative land uses. (D) Future property owners are notified by a stipulation in the land record or property deed which states that the property has received waste at high cadmium application rates and that food chain crops must not be grown except in compliance with paragraph (c)(2) of this section.

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(B)

The pH of the waste and soil mixture is 6.5 or greater at the time of waste application or at the time the crop is planted, whichever occurs later and this pH level is maintained whenever food chain crops are grown.

(C)

There is a facility operating plan which demonstrates how the animal feed will be distributed

to preclude ingestion by humans. The facility operating plan describes the measures to be taken to safeguard against possible health hazards from cadmium entering the food chain, which may result from alternative land uses.

(D)

Future property owners are notified by a stipulation in the land record or property deed which states that the property has received waste at high cadmium application rates and that food chain crops must not be grown except in compliance with paragraph (c)(2) of this section.

(d)

As required by section 66265.73, if an owner or operator grows food chain crops on his land treatment facility, he shall place the information developed in this section in the operating record of the facility.