

3745-67-76 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, must notify the director within sixty days after April 15, 1981.

[Comment: the growth of food chain crops at a facility which has never before been used for this purpose is a significant change in process under rule 3745-50-51 of the Administrative Code. Owners or operators of such land treatment facilities who propose to grow food chain crops after April 15, 1981 must comply with rule 3745-50-51 of the Administrative Code.]

(B)

- (1) Food chain crops must not be grown on the treated area of a hazardous waste land treatment facility unless the owner or operator can satisfactorily demonstrate, based on field testing, that any arsenic, lead, mercury, or other constituents identified under paragraph (B) of rule 3745-67-73 of the Administrative Code:
- (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 paragraph (B)(1) of this rule 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.

- (C) Food chain crops must not be grown on a land treatment facility receiving waste that contains cadmium unless all requirements of paragraphs (C)(1)(a) to (C)(1)(c) of this rule or all requirements of paragraphs (C)(2)(a) to (C)(2)(d) of this rule are met.

(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 two 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)
Until June 30, 1984	2.0
July 1, 1984 to Dec. 31, 1986	1.25
Beginning Jan. 1, 1987	0.5

- (c) The cumulative application of cadmium from waste does not exceed the levels in either paragraph (C)(1)(c)(i) or (C)(1)(c)(ii) of this rule.

- (i) 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 - 15	5	10
greater than 15	5	20

- (ii) 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 - 15	10
greater than 15	20

- (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 rule.

[Comment: as required by rule 3745-65-73 of the Administrative Code, if an owner or operator grows food chain crops on his land treatment facility, he must place the information developed in this rule in the operating record of the facility.]

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