

Appendix L—NWFPA Interim Recommendations for
Managing Potential Risk of Lead Arsenate Uptake From
Former Orchard Sites and Related Documents

Appendix L—Contents

<u>Document</u>	<u>Page</u>
Interim Recommendations for Managing Potential Risk of Lead Arsenate Uptake from Former Orchard Sites.....	1
Northwest Food Processors Association Letter to Washington State Department of Agriculture, January 6, 1999	2
Backgrounder on Crop Plantings and Lead	3

Agricultural Practices Task Force

Interim Recommendations for Managing Potential Risk of Lead Arsenate Uptake From Former Orchard Sites

Background

The FDA Total Diet Study has determined that several samples of carrots, taken last year, exceeded the agency's informal action level for lead. One of the samples was processed by an NWFPFA member company. The product has been voluntarily withdrawn from the marketplace. In each case, the carrots were grown on former orchard sites, where lead arsenate had been used as a pesticide. Lead arsenate was used extensively, prior to 1950, for control of codling moth and other insects.

The NWFPFA Board of Directors formed the Agricultural Practices Task Force to address this issue. The Task Force's initial action is to develop guidance for the 1999 growing season that will help members avoid the risk of lead arsenate uptake from former orchard sites. The Task Force will also be coordinating with regulatory agencies and researchers to further evaluate this issue and develop long term management recommendations.

Interim Recommendations

The NWFPFA Agricultural Practices Task Force recommends that during the 1999 growing season, processors do not plant carrots on former orchard sites, where lead arsenate was used as a pesticide.

The Task Force recommends the following actions to identify former orchard sites:

Field Histories - Field histories should be developed. If the field was in agricultural production prior to 1950, it is at greater risk. Lead arsenate was not used extensively after 1950. If the field was ever used for orchard production, it is at greater risk for elevated lead levels. While field histories will help identify risk factors, they should not be solely relied upon.

Soil Sampling - Soil samples should be taken and analyzed for total lead, total arsenic, and pH. Samples should be taken down to the 8" level, since arsenic is more mobile and may not be found at the surface. Fields should be tested if any of the following apply:

1. The field was in agricultural production prior to 1950
2. The field is a former orchard site
3. There is reason to believe lead arsenate may have been applied to the field

For further information on this recommendation, contact Craig Smith or Connie Kirby, NWFPFA.

January 6, 1999

Jim Jesernig, Director
Washington Department of Agriculture
PO Box 42560
Olympia, WA 98504-2560



Dear Jim:

The Northwest Food Processors Association has been working closely with the Food and Drug Administration to address a recent issue in the Columbia Basin concerning the uptake of lead in a crop grown on the site of an old orchard. It has long been known that the soil in old orchard sites has the potential to contain above background levels of lead, due to the use of lead arsenate. Lead arsenate is a cancelled insecticide that was widely used in orchards prior to 1949.

Recent findings have caused us to re-assess the risk for uptake in some crops. To address this issue the Northwest Food Processors Association is taking the following actions:

1. Informing our membership of the potential for lead uptake in some crops if they are grown on old orchard sites. This has already been done.
2. Forming an interdisciplinary task force to address the issue and develop policy recommendations and a set of guidance documents for our members. This guidance will cover issues such as soil testing, collecting field histories, and risk mitigation. The task force will be appointed this week, and we anticipate its first meeting will be within the next ten days. We intend to have our initial recommendations published well prior to the first planting dates, which will be in March.
3. Coordinating policy development with the Food and Drug Administration. We have been in close contact with the Regional Administrator and have also been in contact with the Center for Food Safety and Nutrition (CFSAN) in Washington, D.C.. The FDA has already offered their assistance in our process.
4. Identifying resource people with expertise in heavy metals, and specifically lead arsenate. We will be using outside resources, such as the laboratories and scientists at the National Food Processors Association, company scientists, USDA experts and University researchers to determine the proper course of action. This identification process is well under way.

We are taking these actions because we believe this issue needs to be addressed prior to the next growing season. I want to make it perfectly clear that consumers are not at risk as a result of this incident. The Columbia Basin issue is an isolated incident that needs to be carefully analyzed to avoid repeating the problem in the future. Additionally, we want to make it clear that this is not a recycled micro-nutrient fertilizer issue.

We look forward to working with the Department on this issue. If you have any questions, please give me a call.

Sincerely,

Craig Smith
Vice President, Environmental Affairs

Backgrounder on crop plantings and lead

The U.S. Food and Drug Administration (FDA), as part of a routine sampling program known as the "Total Diet Study" or "Market Basket Study," recently found elevated levels of lead in a retail sample of frozen mixed vegetables. Analysis determined that it was the carrots in the mix that contained the high amount of lead. The company that processed the carrots voluntarily withdrew them from the market. The level of lead found in the mixed vegetables was above background levels so FDA considered the carrots to be adulterated. FDA's findings pointed to the potential for some crops planted in old orchard land to absorb lead from the soil. It was common practice prior to 1949 to use lead arsenate pesticide to control pests on tree fruit. It was last used in the late 1960s in Washington.

Response

A work group that includes the state departments of Agriculture, Health and Ecology; the U.S. Food and Drug Administration and the U.S. Environmental Protection Agency has been formed to address this issue. Agency representatives met initially on Jan. 13 to share information related to the identified sample. The work group will focus on ways government and industry can work collaboratively to prevent future crops from being planted in soil with elevated lead levels. The agency work group will coordinate closely with industry, which has established its own work group. The WSU Cooperative Extension and other parties also will be consulted. The agency work group is planning to meet in February with potential discussion points to include:

- Identify old orchard land that may have been treated with lead arsenate pesticides.
- Educate growers and homeowners who grow "backyard" gardens about the potential of some crops to absorb lead from the soil, particularly soil around old homes built prior to 1978 and land used as orchards prior to 1949.
- Coordinate information and actions with agricultural stakeholders.
- Conduct field trials to analyze and better understand plant uptake mechanisms in various root crops.
- Develop an ongoing sampling protocol to test products for lead.

The industry has been very cooperative with the work group. The Northwest Food Processors Association is:

- Informing its members of the potential for lead uptake by some crops if they are grown on old orchard land;
- Developing a series of recommendations for their members that will address issues such as soil testing, collecting field histories and other management measures to ensure that crops are not grown on soil with elevated levels of lead;
- Forming an industry task force to develop guidance for their members;
- Coordinating policy development with FDA and other state lead agencies;
- Identifying outside resource people with specific expertise in lead arsenate issues who will be able to help advise on a proper course of action.

Issue

Lead is toxic and has no known function in the human body. Young children are most susceptible to the toxic effects of lead. Repeated exposure to lead can cause irreversible learning difficulties, mental retardation, and delayed neurological and physical development. In adults, exposure to lead affects primarily the peripheral nervous system and can cause impairment of hearing, vision, and muscle coordination. Early symptoms of poisoning may include loss of appetite, fatigue, irritability, anemia, and abdominal pain. There is a blood test available to determine if people have recently been exposed to lead.

FDA closely monitors the level of lead found in foods in this country. It has long been known that the soil in old orchard sites might contain higher levels of lead than normally found due to the use of lead arsenate pesticide. Members of the food processing industry and government are working with growers and researchers to ensure that no further food crops are contaminated.

Background

The carrots that were found to contain elevated levels of lead were grown on a privately owned 70-acre field near Quincy, Washington. Only a portion of the carrots contained high levels of lead. An interview with the previous owner confirmed that the land was an orchard for many years, prior to 1950. It was common practice prior to 1949 to use lead arsenate pesticide to control insects on fruit trees. In Washington it was used to control gypsy and codling moths until the late 1940s, when synthetic pesticides became available. Use of lead arsenate was essentially discontinued in the late 1960s in Washington state, and banned completely on food crops in the United States in 1988.

Soil samples obtained from the field were analyzed for lead and arsenic. Carrots, which were identified by date of harvest and the location in which they were grown in the field, were also analyzed. Adjacent fields and carrots from those adjacent fields did not have elevated lead levels, pinpointing part of the old orchard site as the site of this unusual occurrence.