

Project No. 79-W6

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Project: Almond Diseases
Aflatoxin Monitoring Program

Objectives: (1) To continue the program of monitoring aflatoxins in the various almond products. (2) To continue participation in an aflatoxin analytical check program in cooperation with the USDA, FDA, DFA and various independent laboratories.

Part 1 - Aflatoxin Monitoring

Progress: The monitoring program, which has been continued since 1973, is intended to demonstrate the concern of the almond industry in policing itself and, more importantly, monitoring the yearly trend of removing aflatoxins from edible products intended for human consumption. This monitoring program remains extremely important to: (1) demonstrate the industry's concern for removing aflatoxins, and (2) to provide regulatory officials with the opportunity to direct their resources to more likely areas of food contamination.

The table included with this report shows the percentage of contaminated nuts in select grade, manufacturing grade and oil stock grade almond samples found in the survey from 1973 through 1978.

Almond hulls were added to the survey in 1977 and 1978. Three out of the twenty samples studied in 1978 were found to be positive (9.1, 22.6, and 47.7 ppb).

The DFA is currently conducting the 1979 survey. The following table gives the number of almond samples studied to date, along with the total number of almond samples to be studied this year.

<u>Type</u>	<u>Total</u>	<u>Completed</u>
Select Nuts	100	63
Mfg. Stock	40	23
Oil Stock	10	0
Hulls	20	15

All of the almond samples (select nuts, mfg. stock and hulls) studied to date have been negative. The remaining almond samples, except possibly the oil stock, are scheduled to be completed by the end of February. The almonds going into oil stock may not be processed by this date. These samples will be completed as soon as possible.

Part 2 - Check Sample Program

The Smalley Subcommittee aflatoxin check samples in corn meal, cottonseed meal, and peanut meal are currently being completed and the final results will not be available until late spring of 1980.

Discussion:

The increase in frequency of aflatoxin contaminated samples in 1978 was most likely a reflection of the poor growing season encountered in that year rather than any changes in production made during the year. The results obtained up to this point on the 1979 crop seem to support the above statement. The growing season was excellent and the frequency of aflatoxin contamination appears to be down. It is hoped that, at the completion of the 1979 survey, the frequency of occurrence of aflatoxin will remain low.

Publication:

No new publications have been made by the DFA since the last annual report. However, the DFA did take an active part in the aflatoxin workshop at the spring AOAC meeting, May 6 through 9, 1979, in San Francisco, by supplying a speaker who also was a panel member for the discussion period at the end of the workshop.

Note: A follow-up report will be submitted upon completion of the 1979 survey.

	SELECT NUTS		MFG STOCK		OIL STOCK	
	$\frac{\# \text{ CONTAMINATED}}{\# \text{ SAMPLED}}$	%	$\frac{\# \text{ CONTAMINATED}}{\# \text{ SAMPLED}}$	%	$\frac{\# \text{ CONTAMINATED}}{\# \text{ SAMPLED}}$	%
1973	0/11	0	10/39	27	NS	NS
1974	0/34	0	8/62	13	13/22	60 ☆
1975	NS	NS	13/100	13	11/11	100
1976	NS	NS	7/56	12	30/50	60 ☆
1977	1/89	1	1/30	3	10/10	100
1978	5/100	5	2/41	4	10/10	100

NS : NO SAMPLES TAKEN

☆ : REJECT NUTS, NOT PRESS CAKE MEAL