



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

March 10, 2004

MEMORANDUM

SUBJECT: Review of Fluazifop Butyl Incident Reports  
DP Barcode D299665 Chemical#122805 and 122809

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BACKGROUND

The following data bases have been consulted for the poisoning incident data on the active ingredient Fluazifop Butyl (PC Code: 122805 and 122809):

1) OPP Incident Data System (IDS) - reports of incidents from various sources, including registrants, other federal and state health and environmental agencies and individual consumers, submitted to OPP since 1992. Reports submitted to the Incident Data System represent anecdotal reports or allegations only, unless otherwise stated. Typically no conclusions can be drawn implicating the pesticide as a

cause of any of the reported health effects. Nevertheless, sometimes with enough cases and/or enough documentation risk mitigation measures may be suggested.

2) Poison Control Centers - as the result of a data purchase by EPA, OPP received Poison Control Center data covering the years 1993 through 1998 for all pesticides. Most of the national Poison Control Centers (PCCs) participate in a national data collection system, the Toxic Exposure Surveillance System which obtains data from about 65-70 centers at hospitals and universities. PCCs provide telephone consultation for individuals and health care providers on suspected poisonings, involving drugs, household products, pesticides, etc.

3) California Department of Pesticide Regulation - California has collected uniform data on suspected pesticide poisonings since 1982. Physicians are required, by statute, to report to their local health officer all occurrences of illness suspected of being related to exposure to pesticides. The majority of the incidents involve workers. Information on exposure (worker activity), type of illness (systemic, eye, skin, eye/skin and respiratory), likelihood of a causal relationship, and number of days off work and in the hospital are provided.

4) National Pesticide Telecommunications Network (NPTN) - NPTN is a toll-free information service supported by OPP. A ranking of the top 200 active ingredients for which telephone calls were received during calendar years 1984-1991, inclusive has been prepared. The total number of calls was tabulated for the categories human incidents, animal incidents, calls for information, and others.

## FLUAZIFOP BUTYL REVIEW

### I. Incident Data System

Nine incidents were excluded that could not be positively identified by their incident number.

#### Incident#1192-42

A pesticide incident occurred in 1994, when an individual inhaled the product and reported ataxia and dizziness. No further information on the disposition of the case was reported.

#### Incident#5463-96

A pesticide incident occurred in 1997, when an individual inhaled the product and reported throat irritation, headache, and muscle weakness. No further information on the disposition of the case was reported.

#### Incident#7290-1

A pesticide incident occurred in 1998, when the father of a young boy claims that his son was exposed to the product while he was in utero. The father reported that the boy developed asthma as a result of exposure that was confirmed by a doctor. No further information on the disposition of the

case was reported.

Incident#7340-27

A pesticide incident occurred in 1998, when an individual reported a rash that was not considered not to be related to exposure. No further information on the disposition of the case was reported.

Incident#7579-71

A pesticide incident occurred in 1998, when an individual reported a rash that was considered not to be related to exposure. No further information on the disposition of the case was reported.

Incident#7579-167

A pesticide incident occurred in 1998, when an individual reported eye irritation and pain. No further information on the disposition of the case was reported.

Incident#8046-7

A pesticide incident occurred in a manufacturing plant in 1998, when a woman reported hives and swollen extremities and was treated by a physician. She was removed from work for two weeks and her symptoms resolved. After the woman returned to work, her symptoms reappeared. However, a skin prick test for the active ingredient was reportedly negative. No further information on the disposition of the case was reported.

Incident#8384-146

A pesticide incident occurred in 1997, when a seventy year old individual reported dizziness. No further information on the disposition of the case was reported.

Incident#8384-147

A pesticide incident occurred in 1997, when a forty-eight year old individual reported respiratory irritation. No further information on the disposition of the case was reported.

Incident#8384-148

A pesticide incident occurred in 1997, when a fifty year old individual reported edema. No further information on the disposition of the case was reported.

Incident#8384-149

A pesticide incident occurred in 1997, when a fifty-two year old individual reported pruritus, diarrhea, upset stomach, and gas. No further information on the disposition of the case was reported.

Incident#9252-5

A pesticide incident occurred in 1999, when a seventy-two year old man, who wore personal protective equipment, reported a swollen gland three weeks after using the pesticide. The man was

treated by a physician and diagnosed with cellulitis which is unlikely to be due to his exposure. No further information on the disposition of the case was reported.

#### Incident#10250-27

A pesticide incident occurred in 1999, when a seventy-one year old woman reported shortness of breath and pneumonitis a few days after she used the product. The woman was treated by a physician. No further information on the disposition of the case was reported.

#### Incident#11847-19

A pesticide incident occurred in 2001, when a man reported a rash, pruritus, and dyspnea. The man's girlfriend applied the product to grass and the next day he pulled up weeds. Later that evening, he went to the emergency room. No further information on the disposition of the case was reported.

#### Incident#12633-12

A pesticide incident occurred in 2002, when a 30 year old man reported dizziness, pruritus, and a rash after the product spilled in his house. No further information on the disposition of the case was reported.

#### Incident#12796-9

A pesticide incident occurred in 2002, when a 70 year old man, who was recently diagnosed with high blood pressure, reported tachycardia and hypertension after working in the yard. No further information on the disposition of the case was reported.

#### Incident#12875-15

A pesticide incident occurred in 2002, when a forty-four year old man reported a rash, pruritus, and edema after spraying the product which he spilled on himself. No further information on the disposition of the case was reported.

None of the incidents described above provided strong evidence that fluazifop butyl was or was not causally related to the reported effects.

## II. Poison Control Center Data - 1993 through 1998

Results for the years 1993 through 1998 are presented below for occupational cases, non-occupational involving adults and older children, and for children under age six. Cases involving exposures to multiple products and cases with unrelated medical outcome are excluded. Tables 1-4 present the hazard information for fluazifop butyl compared with all other pesticides on six measures: percent with symptoms, percent with moderate, major, or fatal outcome, percent with major or fatal

outcome, percent of exposed cases seen in a health care facility, and percent hospitalized and percent seen in a critical care facility. Table 1 reports the number of cases on which the data derived in Table 2 are based. Table 2 presents this information for for non-occupational cases involving adults and older children (six years or older). There were insufficient numbers to warrant analysis of occupational cases or children under six years of age.

Table 1. Number of fluazifop butyl exposures reported to the Toxic Exposure Surveillance System (AAPCC), number with determined outcome, number seen in a health care facility for occupational and non-occupational cases (adults and children six years and older) and for children under six years of age only, 1993-1998 .

Subgroup	Exposures	Outcome determined	Seen in Health Care Facility
Occupational: adults and older children	10	8	7
Non-occupational: adults and older children	42	34	9
Children under age six	25	15	2

Table 2. Comparison between fluazifop butyl and all pesticides for percent cases with symptomatic outcome (SYM), moderate or more severe outcome (MOD), life-threatening or fatal outcome (LIFE-TH), seen in a health care facility (HCF), hospitalized (HOSP), or seen in an intensive care unit (ICU) reported to Poison Control Centers, 1993-1998 for non-occupational cases involving adults and older children.

Pesticide	SYM*	MOD*	LIFE-TH*	HCF*	HOSP*	ICU*
fluazifop butyl	61.8%	11.8%	0.0%	21.4%	0.0%	0.0%
All Pesticides	68.5%	10.5%	0.359%	16.5%	6.24%	2.67%
Ratio	0.90	1.12	0.0	1.30	0.0	0.0

\* Symptomatic cases based on those cases with a minor, moderate, major, or fatal medical outcome. Denominator for SYM, MOD, and LIFE-TH is the total cases where medical outcome was determined. Denominator for HCF is all exposures. Denominator for HOSP and ICU is all cases seen in a health care facility.

Fluazifop butyl incidents among non-occupational adults and older children appear about as likely to display symptoms are require care as other pesticides. However, fluazifop butyl exposures are less likely to result in major outcomes requiring hospitalization or intensive care. None of the cases in the three groups required hospitalization or resulted in a life-threatening outcome. The overwhelming

majority of symptomatic cases involved dermal or eye effects (irritation) and occasionally headache.

### III. California Data - 1982 through 2000

Detailed descriptions of 29 cases submitted to the California Pesticide Illness Surveillance Program (1982-2000) were reviewed. In 22 of these cases, fluazifop butyl was used alone or was judged to be responsible for the health effects. Only cases with a definite, probable or possible relationship were reviewed. Fluazifop butyl ranked 136<sup>th</sup> as a cause of systemic poisoning in California based on data for 1982 through 2001. Table 1 presents the types of illnesses reported by year. Table 2 gives the total number of workers that took time off work as a result of their illness and how many were hospitalized and for how long.

Table 1. Cases Due to Fluazifop Butyl in California Reported by Type of Illness and Year, 1982-2000.

Year	Illness Type					Total
	Systemic <sup>a</sup>	Eye	Skin	Respiratory <sup>b</sup>	Combination <sup>c</sup>	
1982	-	-	-	-	-	-
1983	-	-	-	-	-	-
1984	-	2	-	-	-	2
1985	-	-	-	-	-	-
1986	-	-	1	-	-	1
1987	1	-	1	-	-	2
1988	1	-	5	-	-	6
1989	-	-	2	-	-	2
1990	-	1	-	-	-	1
1991	-	-	2	-	-	2
1992	-	-	1	-	-	1
1993	1	-	-	-	-	1
1994	-	-	-	-	-	-

Year	Illness Type					
	Systemic <sup>a</sup>	Eye	Skin	Respiratory <sup>b</sup>	Combination <sup>c</sup>	Total
1995	-	-	1	-	-	1
1996	1	-	-	-	-	1
1997	-	-	1	-	-	1
1998	-	-	1	-	-	1
1999	-	-	-	-	-	-
2000	-	-	-	-	-	-
Total	4	3	15	-	-	22

<sup>a</sup> Category includes cases where skin, eye, or respiratory effects were also reported.

<sup>b</sup> Category not used until 1990. Prior respiratory cases classified as systemic.

<sup>c</sup> Category includes combined irritative effects to eye, skin, and respiratory system.

Table 2. Number of Persons Disabled (taking time off work) or Hospitalized for Indicated Number of Days After Fluazifop Butyl Exposure in California, 1982-2000.

Time period	Number of Persons Disabled	Number of Persons Hospitalized
One day	2	-
Two days	-	-
3-5 days	-	-
6-10 days	1	-
more than 10 days	-	-
Unknown	-	-
Indefinite	-	-

A variety of worker activities were associated with exposure to fluazifop butyl as illustrated in Table 3 below.

Table 3. Illnesses by Activity Categories for Fluazifop Butyl Exposure in California, 1982-2000

Activity Category	Illness Category					
	Systemic <sup>a</sup>	Eye	Skin	Respiratory <sup>b</sup>	Combination <sup>c</sup>	Total
Applicator	2	3	13	-	-	18
Field Worker	1	-	1	-	-	2
Mixer/Loader	-	-	1	-	-	1
Unknown	1	-	-	-	-	1
<b>Total</b>	<b>4</b>	<b>3</b>	<b>15</b>	<b>-</b>	<b>-</b>	<b>22</b>

<sup>a</sup> Category includes cases where skin, eye, or respiratory effects were also reported.

<sup>b</sup> Category not used until 1990. Prior respiratory cases classified as systemic.

<sup>c</sup> Category includes combined irritative effects to eye, skin, and respiratory system.

According to the above activity categories, applicators and other handlers were associated with more exposures than any other category. These illnesses included symptoms of eye irritation, contact dermatitis, nausea, headache, rash, and chemical conjunctivitis.

#### IV. National Pesticide Information Center

On the list of the top 200 chemicals for which NPIC received calls from 1984-1991 inclusively, fluazifop butyl was ranked 158<sup>th</sup> with 17 incidents in humans reported and 5 in animals (mostly pets).

#### V. Scientific Literature

No scientific literature pertinent to the health effects of fluazifop butyl in humans was located.

#### VI. Conclusion



Relatively few incidents of illness have been reported due to fluazifop butyl. The overwhelming majority of cases occurred among handlers who experienced skin or eye effects .

## VII. Recommendations

Skin and eye protection is recommended for handlers of this pesticide.

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