



FOOD DEFENCE INCIDENTS 1950–2008:

A CHRONOLOGY AND ANALYSIS OF INCIDENTS
INVOLVING THE MALICIOUS CONTAMINATION
OF THE FOOD SUPPLY CHAIN

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1. INTRODUCTION

“Food defence” can be defined as “protecting the nation’s food supply from deliberate or intentional acts of contamination or tampering”.¹ In 2002, the World Health Organization published a report stating that “the malicious contamination of food for terrorist purposes is a real and current threat, and deliberate contamination of food at one location could have global public health implications”.² The public health impact of *unintentional* food safety breakdowns continue to highlight, in the minds of many, vulnerabilities that exist in the food supply chain which can be exploited by terrorist groups or those with malicious intentions.

This is the first paper, to our knowledge, that attempts to comprehensively and systematically examine all incidents of the intentional and malicious contamination of foodstuffs along the entire food supply chain. Previous research papers have tended to focus solely on Chemical, Biological, Radiological, and Nuclear (CBRN) incidents, with the food supply chain as merely one target or a vehicle for the dissemination of such materials.³ In contrast, this paper looks at both CBRN and non-CBRN incidents involving foodstuffs. Using a variety of open sources to find and confirm incidents involving the intentional and malicious contamination of foodstuffs at any point on the “farm-to-fork” continuum, we then analyse where along the entire food supply chain they occurred, in order to gain a better understanding of the possible threats such incidents pose to public health.

An increasingly global food supply chain and the aftermath of the 9/11 attacks heightened a perception

that food was vulnerable and that terrorists could use it as a vehicle for the dissemination of harmful agents that could threaten public health. Material allegedly found in 2001 at the Tarnak Farms training camp in Afghanistan indicated an interest on the part of al-Qaeda in plant and animal diseases, doing little to dispel fears of such threats.⁴ Widespread media reports in 2007 regarding the safety of overseas food exports, along with large-scale food safety breakdowns, increased the perceptions of vulnerabilities in the global food supply chain.⁵ One editorial wrote that “if our enemies were purposefully poisoning the food supply, there would certainly be a sense of urgency. Yet not when it comes to China. The threat is real.”⁶

In thinking about what threats we are most at risk from, we bring up easily recalled events, what is termed by social psychologists as the *availability heuristic*. We tend to remember, to paraphrase Charles Dickens, the best of times and the worst of times; but as the Harvard psychologist Carey Morewedge points out, these types of events are both atypical and unrepresentative of the vast majority of our memories and experiences.⁷ Our experience of an event may be direct or mediated via the media. While familiarity is important, affected by the frequency of media reports on the subject, saliency through direct experience also affects our judgment. In an uncertain environment, or in previous times where threats came in the form of lions or tigers, this may serve as a useful mental shortcut. However, legal scholar Cass Sunstein notes that the availability heuristic “can lead to a grossly exaggerated sense of risk.”⁸

1 U.S. Food & Drug Administration: Center for Food Safety and Applied Nutrition, *Food Defense Acronyms, Abbreviations and Definitions*, available at: www.cfsan.fda.gov/~dms/fsdefs.html

2 World Health Organization, *Terrorist Threats to Food: Guidance for Establishing and Strengthening Prevention and Response Systems*, 2002, p.1

3 See, for example, W. S. Carus, *Bioterrorism and Biocrimes: The Illicit Use of Biological Agents in the 20th Century* (Working Paper), Center for Counterproliferation Research, National Defense University (August 1998/July 1999 revision) and H. Mohtadi and A. Murshid, *A Global Chronology of Incidents of Chemical, Biological, Radioactive, and Nuclear Attacks: 1950–2005*.

4 S. Kennedy, “Identifying Potential Risks and Preventing Intentional Contamination: The Basics”, Presentation at the 2007 Meat Industry Research Conference, 24 October 2007, available at: www.meatscience.org/Pubs/mircarchv/2007/MIRCKennedy.pdf

5 R. Pirog and A. Larson, “Consumer Perceptions of the Safety, Health, and Environmental Impact of Various Scales and Geographic Origin of Food Supply Chains”, September 2007, Leopold Center for Sustainable Agriculture, Iowa State University; R. Weiss and N. Trejos, “Crisis Over Pet Food Extracting Healthy Cost”, *The Washington Post*, 2 May 2007; D. Barboza, “Customers Worldwide Pressing Beijing to Act After Tainted-Food Case”, *The New York Times*, 18 May 2007; P. Ford, “China Offers a Plan in Wake of Poisoned-Food Scandals”, *Christian Science Monitor*, 8 June 2007; J. Watts, “Consumer Safety: Made in China”, *The Guardian* (London), 5 July 2007; “Foreign Food Fright”, *The New Zealand Herald*, 5 August 2007.

6 “Chinese Exports Bring a Real Threat”, *St. Petersburg Times* (Florida), 25 May 2007.

7 C. Morewedge et al., “The Least Likely of Times: How Remembering the Past Biases Forecasts of the Future”, *Psychological Science* 16(8), pp. 626–630 (2005).

8 C. Sunstein, “Fear and Liberty”, *Social Research*, 71(4), p. 1 (2004).

Recent events seem evidently able to heighten our perceptions of risk and our sense of vulnerability: a terrorist incident like 9/11; food safety breakdowns like the *Salmonella Saintpaul* outbreak in 2008 which sickened over 1,400 people in the United States and caused an estimated US\$100 million in losses to the tomato industry;⁹ or an incident that highlights problems in supply chain security such as the fake diethylene glycol that killed almost 400 people in Panama or the ongoing investigation in Melamine in foodstuffs.¹⁰

A report by the U.S. Department of Homeland Security lists the variety of ways that food safety breakdowns (i.e. *unintentional* contamination) can impact public health and the economy, in order to underscore the potential impact a terrorist incident in this sector would have.¹¹ Indeed, it is the impact of previous food safety incidents that are often used as examples of the threat of intentional incidents.¹² Examples given include Spain, 1981, where 20,000 injuries and 800 fatalities were caused by industrial rapeseed oil illegally added to consumer's cooking oil, or in China, 1991, where 300,000 people contracted Hepatitis A from contaminated clams.¹³ The logic is that if such unintentional food safety contamination issues still occur, how are we to stop a determined individual or individuals from replicating such negative effects? The Department of Homeland Security states that "the prospect of a mass-scale food contamination event is of particular concern because the nation is subject to major *unintentional* food borne illness outbreaks. Experts reason that...an individual or individuals with malevolent aims could reproduce these outbreaks with more dire consequences."¹⁴

Beyond this spurious logic, the actual *capability* of a terrorist group to replicate the effects of a large-scale

food safety incident is unclear at best. While proposing that it is possible, in the same document the U.S. Department of Homeland Security also posits that "limitations on the survivability of some possible threat agents, security measures to prevent product threat abroad, and careful quality controls for many imported goods, combine to reduce vulnerabilities."¹⁵ The United Kingdom's Centre for the Protection of National Infrastructure (CPNI) believes that "undertaking a major attack on the food supply chain is much more difficult than at first it may be believed".¹⁶

In his oft-quoted resignation speech, former U.S. Health and Human Services Secretary Tommy G. Thompson helpfully said, "I, for the life of me, cannot understand why the terrorists have not, you know, attacked our food supply because it is so easy to do."¹⁷ Others write breathlessly that "the terrorist threat of deliberate contamination of the U.S. food supply is real".¹⁸ In 2003, the U.S. Food and Drug Administration (FDA) declassified a document in which they "concluded that there is a high likelihood, over the course of a year, that a significant number of people will be affected by an act of food terrorism."¹⁹ Given that these types of statements appear simply to be examples of "fact-free analysis",²⁰ they do little to help policymakers sort out actual risk from risks that exist only as a reflection of internalized fears. As the terrorism scholar Brian Michael Jenkins writes "the danger arises when speculation becomes the basis for launching costly efforts to prevent 'what ifs'".²¹

There is very little clear information available in the open sources of evidence of actual *intent* from terrorist groups to attack the food supply chain in order to produce mass casualties, whether with CBRN materials or otherwise.

9 B. Venkataraman, "Amid Salmonella Case, Food Industry Seems Set to Back Greater Regulation". *The New York Times*, 31 July 2008; Centers for Disease Control and Prevention, *Investigation of Outbreak of Infections Caused by Salmonella Saintpaul*, available at: www.cdc.gov/Salmonella/saintpaul/; "Outbreak of Salmonella Serotype Saintpaul Infections Associated with Multiple Raw Produce Items—United States, 2008". *Morbidity and Mortality Weekly Report (MMWR)*, 29 August 2008, available at: www.cdc.gov/mmwr/preview/mmwrhtml/mm5734a1.htm?s_cid=mm5734a1_x#tab.

10 W. Bogdanich and J. Hooker, "From China to Panama, a Trail of Poisoned Medicine". *The New York Times*, 6 May 2007.

11 Department of Homeland Security Office of Inspector General, *The Department of Homeland Security's Role in Food Defense and Critical Infrastructure Protection*, OIG-07-33 (February 2007), pp. 7-9

12 A. S. Khan et al., "Precautions Against Biological and Chemical Terrorism Directed at Food and Water Supplies", *Public Health Reports*, Vol. 116 (January-February 2001), pp. 3-14

13 L. Manning R. N. Baines and S. A. Chadd, "Deliberate Contamination of the Food Supply Chain", *British Food Journal* 107 (4), p. 226.

14 Department of Homeland Security, *The Department of Homeland Security's Role in Food Defense and Critical Infrastructure Protection*, p. 4

15 *Ibid.*, p. 78

16 Centre for the Protection of National Infrastructure (CPNI) and British Standards Institute (BSI), *Defending Food and Drink: Guidance for the Deterrence, Detection and Defeat of Ideologically Motivated and Other Forms of Malicious Attack on Food and Drink and their Supply Arrangements*, Publicly Available Specification (PAS) 96 (March 2008), p. 2

17 W. Branigan et al., "Tommy Thompson Resigns from HHS", *The Washington Post*, 3 December 2004.

18 J. Ostrowsky (Editor), "Introduction", *Colloquy: Towards Progress in Food Protection and Defense*, Minnesota Journal of Law, Science & Technology, 8(1), pp. 175-185.

19 R. Fabi, "FDA Warns of 'Food Terrorism'", *The Boston Globe*, 11 October 2003.

20 B. M. Jenkins, "Foreword", in Lesser, I. O. et al., *Countering the New Terrorism* RAND: Santa Monica (1999), p. xi.

21 *Ibid.*, p. x.

The U.S. Department of Homeland Security states they “lack credible information to indicate transnational terrorist planning for an attack against food and agriculture” on al-Qaeda’s part and note that al-Qaeda is focused on “producing mass casualties, visually dramatic destruction, significant economic aftershocks, [and] fear amongst U.S. population.”²²

Extremist training manuals commonly found online do contain references to the use of poisons, but only in the context of targeted assassinations, not mass poisonings using food as a delivery vehicle.²³ References to anthrax may be overstated, as “mujahidin in the region [Pakistan and Afghanistan] used the term ‘anthrax’ as a catch-all phrase to describe any poison, chemical or biological agent.”²⁴ The utility of such publicly available sources of information on manufacturing biological agents is spurious as well. One technical analysis of the information contained in terrorist manuals regarding poisons does not disregard the intent behind such information but derides the capabilities to manufacture such compounds: “Careful examination of the document shows that it is crammed with errors, seemingly the work of someone with little discernible sense, profoundly ignorant of the nature of simple compounds and incompetent in even minor [laboratory] procedures.”²⁵ Dr. Milton Leitenburg, who has studied biological weapons since the 1960s, examined the manuals and wrote that they “were crude to the point of being useless.”²⁶

The “capability” amassed by al-Qaeda in this regard does not seem to match their intent. Besides the near useless training manuals, the “materials” discovered in Afghanistan were a collation of “journal articles themselves, as well as handbook excerpts on anthrax, plague, botulinum and so on”.²⁷ As Dr. Leitenberg writes in his book, *The Problem of Biological Weapons*, among the reference documents were ten pages of correspondence between an individual in the UK and someone in Afghanistan. Dr. Leitenberg writes:

What the documents indicate is an individual with PhD-level training, who understands the professional microbiology literature, who knows what he must do to obtain and export pathogen cultures in a proper fashion, who is willing to trade on the access provided by his status, while concealing the true purpose of his activities, which was to provide al-Qaeda with the means to attempt its first real BW production capability.... There is no evidence in any of these pages to indicate that any bacterial cultures had yet been obtained, or that any had been shipped to Afghanistan or Pakistan, or that any work had yet begun. In fact all the phrasing on these pages suggests that *none* of these things had yet occurred.²⁸

The Central Intelligence Agency, in its unclassified reporting on terrorist groups’ acquisition or interest in chemical and biological weapons, notes that such groups are mainly “focused on agents for use in small-scale poisonings or assassinations.”²⁹ The report also states that “among CBRN materials, terrorist groups are most interested in chemicals such as cyanide salts to contaminate food and water supplies or to assassinate individuals. Terrorist groups also have expressed interest in many other toxic industrial chemicals—most of which are relatively easy to acquire and handle”.³⁰ This concurs with one of the findings from this study that, not surprisingly, the most commonly used compounds for poisoning were those that were either at hand or readily available on the market.

22 Department of Homeland Security, Office of Intelligence and Analysis, *Homeland Security Threat Overview (Briefing)*.

23 For example, see “Alleged Al Qaeda Training Manual”, cryptome.org/alq-terr-man.htm

24 Deputy Director of National Intelligence for Analysis, *Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 January – 31 December 2004*, p. 7.

25 J. Stein, “Chemist Derides Qaeda Germwar Skills Touted by Manual.” *Congressional Quarterly*; 8 August 2005, available at: www.cq.com/public/20050808A_homeland.html.

26 M. Leitenburg, *The Problem of Biological Weapons*, Stockholm: The Swedish National Defence College, 2004., p.204

27 *Ibid.*, p. 133.

28 *Ibid.*, p. 134.

29 Central Intelligence Agency, *Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 January – 31 December 2004*, available at: www.cia.gov/library/reports/archived-reports-1/jan_jun2001.htm#18

30 *Ibid.*

1.1 DEFINING FOOD DEFENCE

While *food security* in the past has been used interchangeably with *food defence*, the term *food security* is now commonly understood along the lines defined at the World Health Organization's 1996 World Food Summit in Rome that states "food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life".³¹ *Food safety* refers to ensuring that food, at all points along the food chain, is kept safe for consumption in order to reduce food borne diseases; this can include both microbiological, chemical and physical contaminant hazards.³²

In the United States, "the food sector is part of one of the 17 federally recognized critical infrastructure sectors",³³ and *Homeland Security Presidential Directive 7* and *Homeland Security Presidential Directive 9* lay out the various roles and responsibilities the various agencies that have a stake in the food sector will take on.³⁴ The focus on "deliberate or intentional acts of contamination or tampering" has largely been on the use of biological agents; this is apparent in that much of the policies put in place by the United States are contained within the *Public Health Security and Bioterrorism Preparedness and Response Act of 2002*.³⁵

In the United Kingdom, food defence is defined as "[the] security of food and drink and their supply chains from all forms of malicious attack including ideologically motivated attack leading to contamination or supply failure."³⁶

The Asia-Pacific Economic Cooperation's (APEC) Counter-Terrorism Task Force (CTTF) began examining the issue in 2006, with an initiative entitled "Mitigating the Terrorist Threat to the Food Supply". Ambassador Benjamin Defensor, chair of the CTTF, outlines some of the assumptions underlying food defence when he said, "If terrorists were to introduce poison, disease or other contaminants to food stocks, the potential death toll would be high and widespread."³⁷ In 2007, the 21 member countries of APEC endorsed a set of voluntary "Food Defence Principles" at the ministerial meetings in Sydney, Australia.³⁸ Given the "voluntary" nature of these guidelines, it remains to be seen whether their adoption by APEC countries represents an actual recognizance of the issue and it remains to be seen how many APEC countries will actually institutionalize such measures, especially given the larger need for improving the safety of food imports in the region.

31 "Rome Declaration on World Food Security." *World Food Summit, 13-17 November 1996, Rome, Italy*; available at: www.fao.org/wfs/index_en.htm

32 World Health Organization, *HACCP-Introducing the Hazard Analysis and Critical Control Point System*, available at: www.who.int/foodsafety/fs_management/haccp_intro/en/index.html

33 DHS, *Role in Food Defense and Critical Infrastructure Protection: Homeland Security Presidential Directive 7(HSPD-7)* available at: www.whitehouse.gov/news/releases/2003/12/20031217-5.html; *Homeland Security Presidential Directive 9(HSPD-9)* available at: www.whitehouse.gov/news/releases/2004/02/20040203-2.html

34 Department of Homeland Security, Office of Inspector General, *The Department of Homeland Security's Role in Food Defense and Critical Infrastructure Protection*, OIG-07-33, 12-13 (February 2007).

35 The full text is available at: www.fda.gov/oc/bioterrorism/Bioact.html

36 CPNI, *Defending Food and Drink*, p. 1

37 *APEC to Increase Protection of Food Supply from Terrorist Attack* (News Release), 15 September 2006. Available at: www.apec.org/apec/news___media/2006_media_releases/150906_yn_cttf_foodsupply.html.

38 *The Nineteenth APEC Ministerial Meeting* 5-6 September 2007, Sydney, Australia. Joint Statement, available at: www.apec.org/apec/ministerial_statements/annual_ministerial/2007_19th_apec_ministerial.html; *Food Defense Pilot Project-Peru: Putting Principles into Practice*, 2008/SOM2/CTTF/021, 16th Counter Terrorism Task Force Meeting, 23-24 May 2008, Arequipa, Peru.

2. ANALYSING INCIDENTS OF INTENTIONAL CONTAMINATION THROUGHOUT THE FOOD SUPPLY CHAIN

The following is a breakdown of our chronology of incidents involving the intentional contamination of foodstuffs along the entire “farm-to-fork continuum”.³⁹ Starting with incidents at animal and plant production facilities, we move along the food supply chain through product assembly, processing, packaging, storage,

transportation; retail and food service; and, finally, incidents at the consumer level. We also include incidents involving the intentional contamination of the water supply and provide separate breakdowns of incidents involving biological or radiological agents.⁴⁰

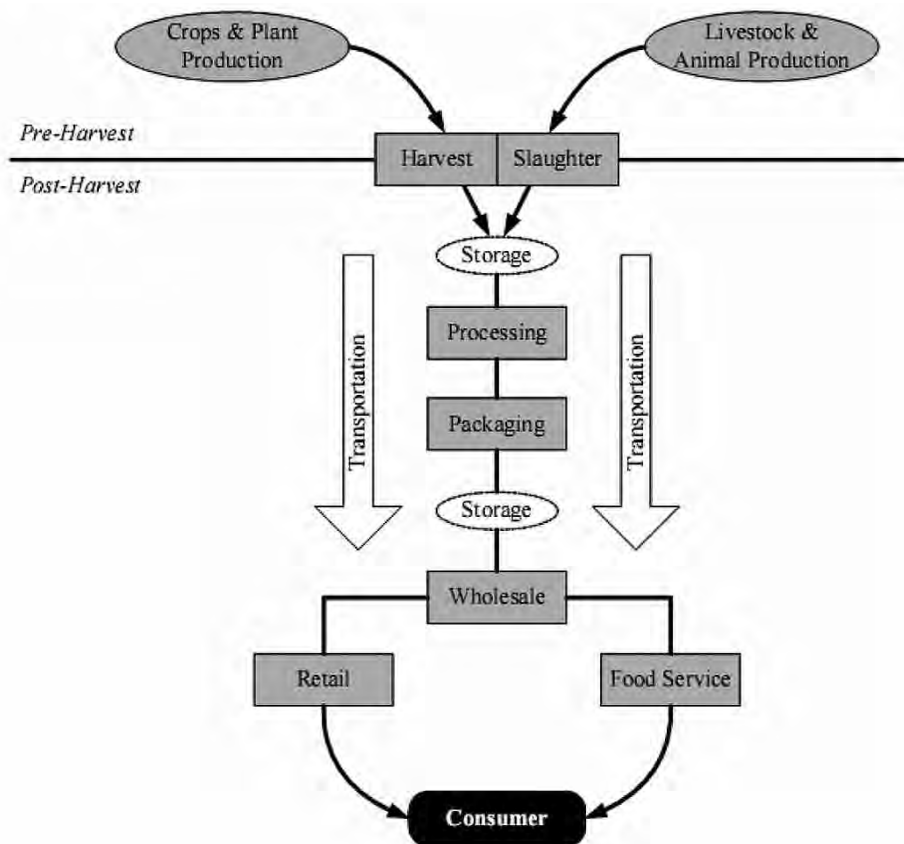


Figure 1: Overview of the Farm-to-Table Continuum⁴¹

This study does not look at all attacks upon the food supply chain. It only examines incidents that resulted in the intentional contamination of foodstuffs for malicious ends. For this reason we exclude incidents of physical attacks (e.g. bullets, bombs, arson and vandalism) that did not result in the intentional

contamination of foodstuffs.⁴² We also exclude incidents where intentionally or maliciously contaminated food items were mailed directly to corporations as extortion attempts or scare tactics by single-issue groups designed to cause harm to a corporate brand or consumer confidence.⁴³

³⁹ See *Appendix 1* for a full listing of cases.

⁴⁰ Incidents involving the water supply to agricultural or livestock facilities are included in those sections.

⁴¹ *DHS Role in Food Defense*, p. 123

⁴² The case of animal-rights extremists is one that was, briefly considered. There are a number of incidents involving extremists, operating under the guise of “Animal Liberation Front” (ALF) or other names, who have carried out attacks against retail outlets, farms, slaughterhouses, delivery trucks, fishing boats and the like. The incidents range in severity from petty vandalism (which itself can have a negative economic impact on small businesses), the destruction of equipment, theft of livestock or animals, to wholesale arson. The bulk of the incidents are confined to North America, Mexico, Western Europe, Australia and New Zealand, although one website claims a group of sympathizers in Malaysia (but without reports of any incidents from there or the wider SE Asian region). One source for *claims* of incidents involving ALF sympathizers is the website www.directaction.info. Destructive attacks against a variety of points along the food supply chain/farm-to-fork continuum would seem to constitute a part of food defence. However, given the State’s responsibilities to public health, and since these incidents are not carried out with the intent, or result, of directly harming consumer, they have not been included for analysis in this report.

⁴³ See, for example, the case involving ALF sympathizers or members sending poisoned chocolate *Mars* bars to media outlets, accompanied by warning letters and threats. “Scotland Yard Says Two Mars Bars Known to Be Poisoned”. *AP*, 20 November 1984; “Mars bar poison claim was hoax, group says”. *The Globe and Mail*(Canada), 20 November 1984.

It also means incidents such as the one involving the poisoning of half a million trout at a Northern Ireland fishery are not counted⁴⁴ or where facilities may be intentionally contaminated but where no affected fish or water entered the supply chain.⁴⁵ Indeed, while these may cause economic losses or be seen as an example of a 'vulnerability' which could be exploited by nefarious plotters, one could also view these incidents as examples where existing systems function as they should.

We exclude these cases, recognizing the importance both of ensuring the viability of the food and beverage industry but noting that one of the main priorities of a state is ensuring the health, safety and well-being of its citizens. Corporations should be concerned with mitigating the threat of extortion attempts, damage to livestock and crops, and so on. The state must be concerned with preventing and responding to incidents that may affect public health on a large scale. As such, attacks on animals that do not enter the supply chain, hoaxes, threats and extortion attempts not involving the security of the food supply chain from protecting citizen's public health are discounted.

2.1 SOURCES

Much of the data is spurious or hard to come by, or simply is a circle of citing other reports without any primary data or confirmation. We first looked at other chronologies of incidents, such as those by Carus and Mohtadi, although these are limited to all incidents of the use or threat of CBRN by non-state actors.⁴⁶ These incidents, along with new cases, were confirmed using contemporary newspaper and media accounts through *LexisNexis*, *Factiva*, and *Dialog*. We also referred to the U.S. Department of State for its *Country Reports on Terrorism* and its earlier *Patterns of Global Terrorism*⁴⁷, and a variety of U.S. Federal Bureau of Investigation (FBI) reports on terrorism.⁴⁸ We also reviewed terrorism databases such as the Memorial Institute for the Prevention of Terrorism (MIPT)'s *Terrorism Knowledge Base*,⁴⁹ National Consortium for the Study of Terrorism and Responses to Terrorism

(START)'s *Global Terrorism Database*,⁵⁰ and National Counter Terrorism Center's *Worldwide Incidents Tracking System*.⁵¹

While not using any structured techniques in assessing reliability and credibility⁵², sources were subjectively judged on such a basis. Reports with single sources of dubious quality, sources citing accusations (but nothing on criminal charges or cases), translations of government broadcasts (e.g. *BBC World Monitoring's* translations of Khmer Rouge radio reports) were generally discounted unless a second reliable source was found. Reports of plots, threats and hoaxes were discounted. We have included in Appendix 2, a full listing of the 126 unconfirmed cases for the benefit of other researchers.

44 "Intruder poisons fishery". *The Evening Standard*(London), 12 February 2001.

45 See also the case where an individual poured sodium cyanide into 829 cartons of live crabs destined for Taiwanese markets over a period of nine months in 1994. The crabs were discarded when found dead upon arrival. See "Man Charged with Using Cyanide on Shipment of Crabs". *Straits Times* (Singapore), 6 July 1996.

46 See Carus, *Bioterrorism and Biocrimes* and Mohtadi, *A Global Chronology of Incidents*

47 See *Country Reports on Terrorism* available at: www.state.gov/s/ct/rls/crt/

48 See FBI, *Reports and Publications*; www.fbi.gov/publications.htm

49 The MIPT Terrorism Knowledge Base database has migrated to START's database, www.mipt.org/

50 Global Terrorism Database: www.start.umd.edu/data/gtd/

51 Worldwide Incidents Tracking System: wits.nctc.gov/

52 Department of the Army, *Open Source Intelligence FMI 2-22.9*, pp. 4-9 to 4-10.

2.2 WATER SUPPLY

Total Cases:	7
Agents used:	Pesticide; Insecticide; Cyanide; “Sheep dip”; VX; Sarin.
Fatalities:	3
Injuries:	<100

Incidents involving the water supply are sparse and reveal simply how difficult it is to accomplish. Allegations outnumber actual incidents: unconfirmed reports of South African and Rhodesian special forces using chemical and biological weapons in the 1970s during the Rhodesian civil war,⁵³ allegations of Saddam Hussein poisoning the water supply of the Marsh Arabs in 1993–1994⁵⁴, or of Myanmar authorities poisoning rivers supplying water to the Shan areas,⁵⁵ as well as the 1985 case alleging plutonium contamination of the New York City water supply.⁵⁶ These are just a sampling of the unconfirmed reports, more of which can be found in *Appendix 2*.

We found three confirmed incidents involving the intentional contamination of a community’s water supply. The largest incident occurred in 1980 when the water mains supply to three suburbs of Pittsburgh was contaminated with a pesticide, forcing city officials to shut it down for two weeks and to bring in water for 10,000 residents. The introduction of the pesticide required a working knowledge of the water supply network. Casualty accounts vary from “some” to 20.⁵⁷ One author, citing a CDC report, writes that “there was no increase of attendance at hospitals”.⁵⁸

During the uprising against the Ceausescu regime, Romanian media warned that elements of the security

services poisoned the water supplies to the towns of Sibiu, Timisoara, and Ciurila. A medical team from “Doctors without Borders” tested the water from a municipal water tank in Sibiu and found traces of VX and Sarin gas; there are no verified reports of testing done in Timisoara or Ciurila, and it is possible their mention was the result of rumours swirling in the aftermath of the revolution. Reports vary on casualties; none mention fatalities and injuries range from an ambiguous “several” to five serious cases.⁵⁹ It seems very little follow-up on this case has been reported, at least in the English language media.

In an attempt to improve his water purification business, Cao Qian attempted to poison a reservoir in Ruyang County, Henan Province, by putting 500ml of a pesticide in it. The amount of pesticide was enough to make the water smell bad, but insufficient to cause any harm. However, it is reported that 42 people were admitted to hospital; all were released within four days of the incident.⁶⁰

Incidents involving the water supply to a particular facility make up the other four cases. In 1987, Sheep Dip was placed in the water supply of a Sydney rehabilitation centre for mental patients, injuring five.⁶¹ In 1990, in Israel, two children fell sick after drinking insecticide-laced tap water; the water tank on top of their apartment building had been tampered with. Authorities found a second water tank also tampered with.⁶² In 1992, the PKK put cyanide into the water tanks of a Turkish airbase. Officials say they found two 25lb empty boxes of cyanide near the tank.⁶³ Indeed, the only casualties found among these

53 L. White, “Poisoned Food, Poisoned Uniforms, and Anthrax: Or, How Guerrillas Die in War”, *Oziris*, 2nd Series, Vol.19, Landscapes of Exposure: Knowledge and Illness in Modern Environments, (2004), pp. 220–233; *ANC Submission to the TR-Executive Summary*, available online: www.anc.org.za/ancdocs/misc/tresum.html

54 S. Bhatia, “Murder of the Marshes”, *The Observer* (London), 28 February 1993; D. Orr, “Iraq ‘poisons Marsh Arabs’; ‘Mass exodus into Iran as Saddam assault threatens to destroy habitat’”, *The Independent* (London), 27 November 1994.

55 “Shan human rights group accuses Myanmar junta of poisoning villagers”, *Deutsche Presse-Agentur*, 23 February 1999; W. Barnes, “Poisoned Rats Used to Kill Refugees”, *The South China Morning Post*, 23 February 1999.

56 “Plutonium detected in NYC water”, *AP*, 27 July 1985; Bogen D. C. et al., “Threat to the New York City Water Supply—Plutonium”, *The Science of the Total Environment*, Vol. 70, 101–118 (March, 1988). J. Purnick, “Back When A Water Scare Was a Crisis”, *The New York Times*, 28 September 2000.

57 “Pittsburgh Residents Line Up For Drinking Water”, *AP*, 9 December 1980; “Water Supply Contaminated in Areas of Pittsburgh”, *The New York Times*, 10 December 1980; J. Bronson, “Police Say Water Mains Deliberately Polluted With Pesticides”, *AP*, 16 December 1980; “Police Narrowing Search in Water Contamination Probe”, *AP*, 18 December 1980; “Grand Jury to Probe How Pesticide Got Into Water Line”, *AP*, 20 February 1981.

58 P. R. Hunter, *Waterborne Disease: Epidemiology and Ecology*, Wiley, 1997, p. 269; See also, “Chlordane contamination of a public water supply—Pittsburgh, Pennsylvania”, *Morbidity and Mortality Weekly Report (MMWR)* 30(46), (27 November 1981).

59 “Ceausescu Escapes, Troops Fight Secret Police”, *Japan Economic Newswire*, 22 December 1989; N. Morozov, “Romania: Uprising’s Headquarters Formed”, *JASS*, 22 December 1989; A. Lieven, “Confusion and Rumour Rule as Shooting Stops; Romanian Unrest”, *The Times* (London), 26 December 1989; P. Green, “French team confirms poison in water supply”, *UPI*, 29 December 1989; W. B. Ries, “Romania sheds decades of totalitarian rule”, *UPI*, 29 December 1989; J. Adams, “Securitate’s poison secret discovered”, *The Sunday Times* (London), 4 February 1990.

60 “Chinese man arrested for poisoning reservoir”, *BBC Worldwide Monitoring*, 6 October 2003; D. Fang, “Man Admits Pouring Poison in Reservoir”, *South China Morning Post*, 7 October 2003; “Businessman jailed for water poisoning”, *Xinhua General News Service*, 25 December 2003.

61 “Five Sick after Poison Attack”, *The Telegraph* (Australia), 10 September 1987.

62 R. Rees, “Nationalist Motive Suspected; Two Kids Sick from Poisoned Water in Jerusalem”, *The Jerusalem Post*, 4 February 1990.

63 “Turks Report Attempt to Poison Air Force Unit”, *Reuters*, 28 March 1992; A. Chelysev, “Terrorists Poison Water in Turkish Army Cantonment”, *JASS*, 29 March 1992.

particular cases are that of the Philippines troops drinking from a poisoned well that had been contaminated when the MILF fled the village, killing three and sickening 25.⁶⁴

The small number of incidents found suggest that it is much harder to intentionally contaminate water supplies

on a scale that would have a large public health impact. Contaminating the water supply to a single facility may be more feasible as can be seen by the relatively high figures in the Philippines case, where the individuals drank from one contaminated well.

2.3 PRE-HARVEST: ANIMAL AND PLANT PRODUCTION

Total Cases: 1
Agents used: pesticide
Fatalities: 0
Injuries: 0

Incidents involving the intentional contamination of animals or crops that ended up in the food supply chain are extremely rare. Indeed, of the 365 confirmed cases we could only find one incident where contaminated crops were sent to market. However, even in this case, they were recalled and tested before they could be sold.

A series of intentional contamination incidents occurred in Australia in 2006, with reports indicating at least three separate incidents between March and August of 2006.⁶⁵ A water tank used by a contracted crop duster, Bowen Airspray, was contaminated with glyphosate, an ingredient in a commonly available pesticide called "Round Up".⁶⁶ The contamination caused noticeable visible changes in the crops affected; however, one farm out of the three had distributed its product and issued a recall.⁶⁷ Laboratory tests indicated that the level of contamination did not preclude a full recall and crops could be sent to market. In the August 2006 incident, three farms estimated losses at AU\$1 million.

There are a number of incidents where farms or factories were damaged or destroyed by outside attackers.⁶⁹ Cases involving intentional contamination at this point of the food supply chain where animals, animal feed or crops are the target occur more often than their use as a vehicle for harm towards the general population. While they resulted in the deaths of numerous animals, or the destructions of crops, causing economic losses, they did not result in any human fatalities further down the supply chain. Some notable incidents include:

- The alleged poisoning of cattle during the Mau Mau rebellion in Kenya.⁷⁰
- The poisoning of the water supply to a farm in Alabama with cyanide in 1970, resulting in the deaths of 30 cattle.⁷¹
- The contamination of cattle feed by Brian "Skip" Lea in Wisconsin, 1999. No cattle died, but it forced a recall costing the company [millions].⁷²
- The intentional contamination in 2001 of a Northern Ireland fishery, resulting in the destruction of 500,000 fish.⁷³
- The killing of 3100 chickens, 243 pigs, 300 fish and 10 oxen over a period of months by Chinese serial murderers Du Runqiong and Tang Youhua, most likely using the banned rat poison *Dushuqiang* (which roughly translates to "strong rat poison"), containing tetramine.⁷⁴

64 "Poisoned well kills three soldiers, sickens 25 others". *LPI* 3 December 1993.

65 M. Cuddihy, "Sabotage" (Transcript), *Stateline Television*, available at: www.abc.net.au/stateline/qld/content/2006/s1706800.htm

66 R. Viellaris, "Farms hit by poison spray sabotage". *The Courier Mail* (Australia), 1 August 2006; "Saboteur Destroys Crops Worth Up To \$1 million in North Qld". *AAP Newsfeed*, 1 August 2006.

67 Viellaris, "Farms hit by poison spray sabotage".

68 R. Viellaris, "All clear on beans—Sabotage bill could hit \$1m". *The Courier Mail* (Australia), 1 August 2006.

69 Many reports of ALF-inspired incidents can be found on a website run by a sympathizer at www.directaction.info. The bulk of these incidents consist of petty vandalism (paint thrown at butchers, vehicles keyed, windows damaged), damaging farm or slaughterhouse equipment, the freeing of farm or animals at laboratory testing facilities, or the destruction of property through arson.

70 *Bioterrorism and Biocrimes*, pp. 80–81; See also *Agro-terrorism: Chronology of CBW Incidents Targeting Agriculture and Food Systems 1915–2006*, available at: cns.miss.edu/research/cbw/agchron.htm

71 *Agro-terrorism: Chronology of CBW Incidents*

72 *Ibid.*

73 "Intruder poisons fishery". *The Evening Standard* (London), 12 February 2001.

74 "Chinese Police Nab Mass Poisoner". *LPI*, 15 December 1995; "Mother and Son Confess Poisoning". *South China Morning Post* (Hong Kong), 23 December 1995; "Mother who poisons 18 sentenced to death". *LPI*, 28 December 1995; "China Executes Mother-Son Poison Team" *LPI*, 10 January 1996.

2.3.1 The Chilean Grape Scare

A phone call to the U.S. embassy in Santiago in March 1989 claimed that Chilean grapes destined for export had been poisoned with cyanide.⁷⁵ The U.S. Food and Drug Administration tested the grapes, and found two with trace amounts (i.e. non-lethal) of cyanide.⁷⁶ The United States and four other countries banned Chilean grape imports, with Chile claiming \$300 million in losses to an important industry.⁷⁷ It is unclear if the grapes were thought to have been contaminated at their point of origin, or during the packaging or storage

phase. However, later tests disputing the finding of cyanide, so it was not clear if there was a real risk of poisoning to humans, and Chile sued the United States.⁷⁸

While it is a widely cited incident, often used to highlight the actual or potential economic losses associated with a terrorist incident (depending on whether it is viewed as an actual case or not),⁷⁹ it may be better served as a lesson in how poor risk and crisis communication can cause far more damage to the economy than any actual terrorist incident.

2.4 POST-HARVEST

2.4.1 Product Assembly, Processing, Packaging, Storage

Total Cases: 3
Agents used: Mercury; Rat poison
Fatalities: 0
Injuries: 125

At this point in the food supply chain we can find three confirmed incidents where foodstuffs were intentionally contaminated. There are numerous unconfirmed allegations, broadcast on Khmer Rouge radio, alleging the Vietnamese forces in Cambodia of contaminating a variety of items from 1980–1988.⁸⁰ We also discounted the case of an incident occurring in Israel of a Palestinian ring with a machine for counterfeiting stamps on expired eggs in the hopes of giving Israeli's salmonella. This counterfeit ring was in operation for 18 months; while one Israeli woman was reported to have died of salmonella poisoning during this timeframe,

there's no indication whatsoever she got salmonella from eating old eggs sold with counterfeit stamps.⁸¹

The first confirmed incident occurred in 1978, where five people were injured when a group calling itself the “Arab Revolutionary Army-Palestine Command” injected mercury into oranges. Contaminated oranges were found in West Germany, Netherlands and Sweden. The oranges were apparently poisoned at Rotterdam port.⁸² The second, most recent case, involved 16 restaurants in central China receiving noodles that had been intentionally poisoned at the factory (newspaper reports stated that there was a dispute between the landlords and those leasing the factory). Around 120 became ill as a result of eating the poisoned noodles.⁸³ In 2005, glass and needles were found in at least five loaves of Kingsmill brand bread loaves, apparently contaminated at the factory, in the United Kingdom.⁸⁴

75 *Agro-terrorism: Chronology of CBW Incidents*

76 “Ottawa had to act on Chilean fruit”. *The Financial Post* (Toronto, Canada), 16 March 1989.

77 P. J. Hiltz, “Don’t Eat Grapes, FDA Warns: Cyanide Traces Found In Fruit From Chile After Phone Threat”. *The Washington Post*, 14 March 1989; D. Mesce, “Chileans Charge U.S. Officials Contaminated Grapes”, *AP*, 10 September 1990.

78 “Chileans Charge U.S. Officials Contaminated Grapes”, *AP*, 10 September 1990; S. Christian, “Chile May Sue U.S. Over Grape Scare”, *The New York Times*, 12 September 1990; “Chilean grape growers sue U.S. over cyanide scare”. *UPI*, 13 February 1992; W. R. Long, “New Information Suggests ‘89 Grape Scare was Hoax”. *Philadelphia Inquirer*, 2 January 1995.

79 R. Casagrande, “Biological Terrorism Targeted at Agriculture: The Threat to U.S. National Security”. *The Nonproliferation Review* (Fall/Winter 2000), p. 97

80 See *Appendix 2* for a listing of these reports.

81 J. Pate, et al., *2000 WMD Terrorism Chronology: Incidents Involving Sub-National Actors and Chemical, Biological, Radiological, or Nuclear Materials*, available at: cns.mil.edu/pubs/reports/cbrn2k.htm; R. L. Frerichs, et al., *Historical Precedence and Technical Requirements of Biological Weapons Use: A Threat Assessment*, Sandia Report SAND2004-1854 (May 2004), p. 44

82 D. Doder, “Terrorists Poison Israeli Oranges”. *The Washington Post*, 2 February 1978; “Origin of fruit uncertain Germans find more tainted oranges”. *The Globe and Mail* (Canada), 3 February 1978; AP, 3 February 1978; “Strange Fruits”. *Time Magazine*, 13 February 1978.

83 “Scores of Chinese sickened by noodles laden with rat poison”. *Deutsche Presse-Agentur*, 8 August 2001.

84 M. Adams, “Glass and Needles Found in Loaves of Bread”. Press Association, 14 September 2005; “Bread Alert”. *The Times* (London), 15 September 2005.

We can assume the cases in this section are underreported, as is the case in the extortion incidents (see below), because of the fear of copycat incidents and to minimize damage to consumer confidence and business. For example, Germany reported on average, two to three incidents per week in 1998.⁸⁵ The United Kingdom's Food Standards Agency says that "all malicious tampering incidents involving physical contamination are recorded as 'other' in order to preserve confidentiality".⁸⁶

2.4.2 Other Criminal Uses of the Food Supply Chain

An interesting case in Thailand highlights how the food supply chain can be exploited for nefarious means, but not necessarily for intentionally poisoning consumers. The manner in which the perception of a terrorist threat to human life magnified this criminal incident into a damaging crisis for a sector of the Thai economy, serves as an important lesson for a sober analysis of risk and threat, as well as the importance of sound risk and crisis communications.

In 2003, one man died and seven seriously injured after drinking a bottle of Thai wine in Pattaya. The labels on the wine were forged, and it was initially thought (and still reported in some quarters) that the incident was an attempt to damage the reputation of the winemakers by a rival company. As the story developed, the event was blamed on from Russian mobsters to "an act of terrorism".⁸⁷ Reports indicated that lab tests found gamma-butyrolactone (GBL), tetrahydrofuran, and acetonitrile in the bottles. In fact, the bottles of wine were being used by a gang to smuggle GBL (a narcotic, used by itself, or as a precursor to GHB, and sometimes marketed under the term "liquid ecstasy") to the United States. The Thai individual employed to ship the wine to the USA did not carry out the job (it appears she did not realize what was in the bottles), instead giving some bottles to her ex-husband, who promptly shared them with friends. The incident caused serious damage to the reputation and sales of the Thai wine company over the next two years.⁸⁸

⁸⁵ GeneralCologneRe, *Loss & Litigation Report: Recall of Food & Beverage*, January 2003.

⁸⁶ Food Standards Agency, *Annual Report of Incidents 2007*, available at: www.food.gov.uk/news/newsarchive/2008/may/incidents07

⁸⁷ "Thai Police Believe Shipment of 'Poisonous' Wine to U.S. Possibly Act of Terrorism". *World News Connection*, 2 July 2003.

⁸⁸ "Lethal Business Feud: Tainted wine kills one, leaves 7 sick". *The Nation* (Thailand), 27 June 2003; "Precautionary Measure: Sales of La Sainte Wine Suspended". *The Nation* (Thailand), 28 June 2003; "Westerner is key suspect in wine killings". *The Nation* (Thailand), 30 June 2003; "Thai police puzzled over source of deadly fake wine". *Deutsche Presse-Agentur*, 2 July 2003; "Thai Police Suspect 'Poisonous' Wine Bound for U.S. Additive for 'Date-Rape' Drug". *World News Connection*, 3 July 2003; "Police link killer-wine gang to drug trade". *The Nation* (Thailand), 4 July 2003; "Swede linked to tainted wine". *The Nation* (Thailand), 5 July 2003; "Label forgers interviewed". *The Nation (Thailand)*, 6 July 2003; "Police issue warrant for Scandinavian suspect". *The Nation* (Thailand), 8 July 2003; "FDA looks to restrict chemical". *The Nation* (Thailand), 17 July 2003; "Thai Fruit Wine Industry Still Under Cloud of Fatal Incident". *Thai Press Reports*, 8 November 2004; "Pattaya Poisoning Tragedy Still Haunting Thailand Wine Industry". *Knight-Ridder Tribune Business News*, 8 November 2004.

2.5 RETAIL AND FOOD SERVICE

Total Cases: 85
Agents: Acetone; Arsenic; Atropine; Cyanide; Herbicide; Insecticide; Pesticide; Physical contaminants (various); Rat poison; Rohypnol; Salmonella Typhimurium; Thallium
Fatalities: 123
Injuries: 3304

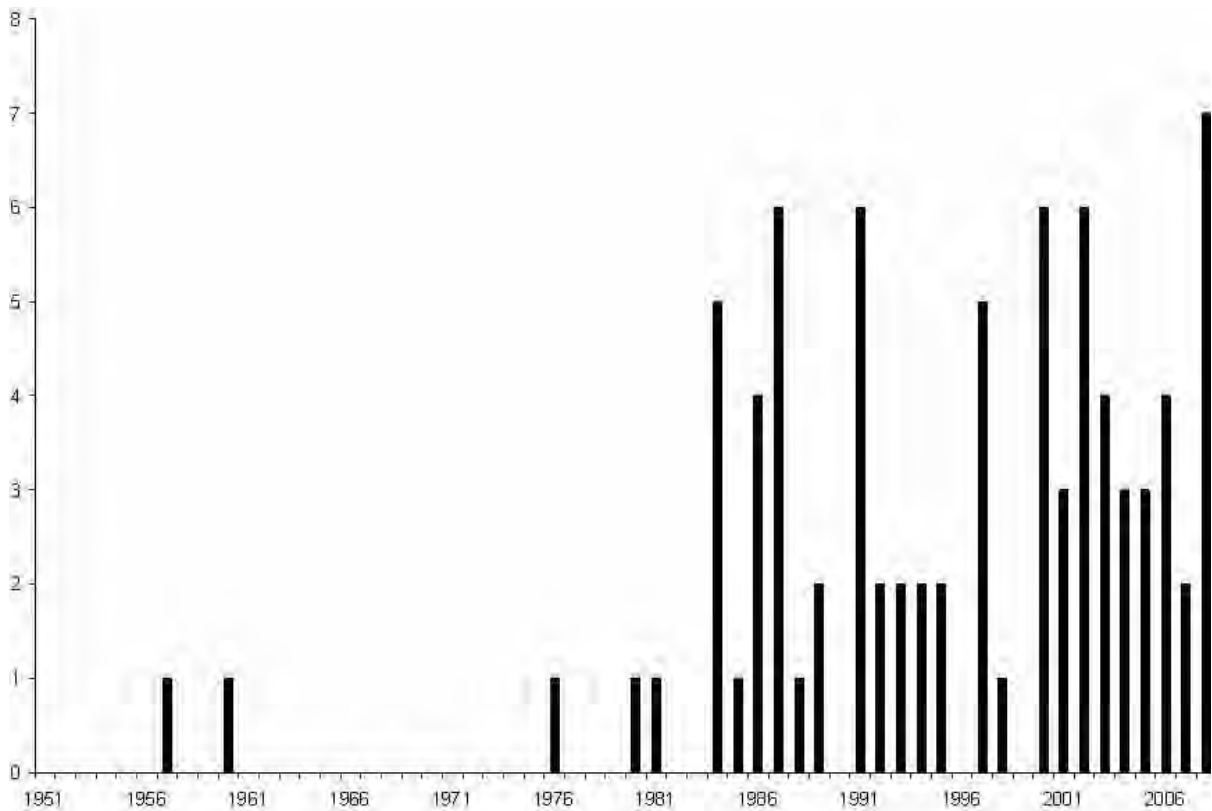


Figure 2: Annual Cases at the Retail & Food Service Node

At the retail and food service point along the farm-to-fork continuum, we record a total of 89 cases. Of these 52 per cent can be classified directly as extortion or exhibit similar patterns to extortion attempts, involving intentionally contaminated products anonymously placed in retail outlets such as supermarkets or vending machines.⁸⁹ The earliest recorded extortion incident occurred in 1976 when Stephen Grant Morton placed tainted products on supermarket shelves in Colorado Springs, CO and Houston, TX as part of larger plot that involved letter bombs and live ticks being sent through the mail.

The two earliest incidents—in 1957 and in 1960, respectively—were both targeted political assassination

attempts, one occurring at a conference in West Berlin in an attempt on the life of a KGB defector and the other in a restaurant in Switzerland in the assassination of Cameroonian opposition leader Felix-Roland Moumie by the French SCDE.

Accurate data at this point of the food supply chain is extremely difficult to obtain. Tampering at this stage may be actual criminal incidents (often accompanied by extortion threats), accidental contamination with physical contaminants reported as intentional, psychosomatic episodes, or copycat incidents carried out for a variety of reasons. Heinz alone reported 220 tampering incidents in 1989, most involving glass or razor blades.⁹⁰ A U.S. company in 1989 claimed its

⁸⁹ As noted before, extortion cases in which maliciously contaminated foodstuffs were, for example, mailed directly to a corporation (where the public's health was not in danger) are not included.

⁹⁰ A. Meade & J. Fife-Yeomans, "Food Terrorism". *The Weekend Australian*, 15 February 1997.

products had been tampered with 600 times (it is not clear what time period this spans).⁹¹ Incidents categorized as physical contamination or extortion using the threat of or actual contamination or otherwise, are not widely reported by many authorities due to the fear of copycat incidents and to minimize damage to consumer confidence and business in the event the extortion attempt is merely an unfounded threat, or a hoax. This is borne out especially by Japan's and the United Kingdom's experience during the 1980s with a number of copycat extortion and physical contamination cases (Japan in 2008 is currently experiencing a number of copy-cat cases involving physical contaminants found in supermarkets and the well-publicized ALF threats (not carried out) of contaminated foodstuffs.⁹²

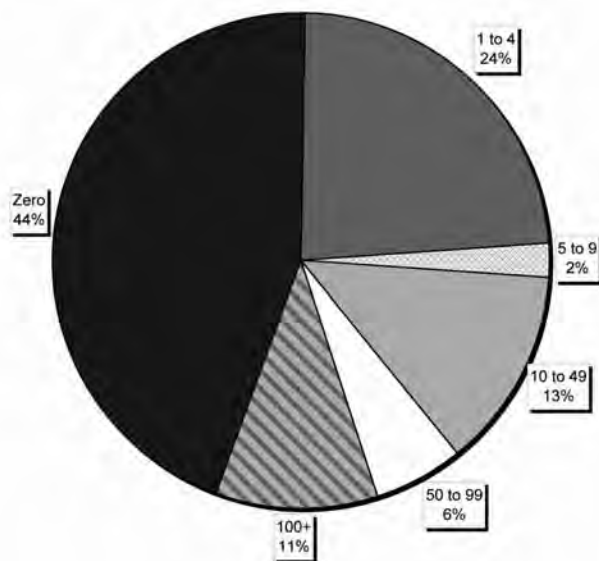


Figure 3: Casualties per incident at the Retail & Food Service Node

We also do not include data on “drink spiking” incidents given the unreliability of the data found, even though they involve the intentional, malicious contamination of a foodstuff and occur at the food service level, or at the consumer level in the home.⁹³

Incidents at this part of the food supply chain involved the heaviest casualties, with an average of 40 casualties (fatalities + injuries) per incident. Eleven out of the 12 mass-casualty incidents found occur at this point of the food supply-chain.⁹⁴ Forty-four per cent of the total casualties, however, occurred in two single incidents. The first, in 1984, was the result of salad bars being poisoned by members of the Rajneeshee cult, in which 751 people were affected (see section 4.5 Biological Weapons). The second incident occurred in 1992 at the College of Finance and Taxation in Zhengzhou, China where 788 people fell ill from arsenic poisoning. The perpetrator, Li Yuan, mixed arsenic (amounts vary, earlier reports state 350 grams, while later reports give it as two pounds) with the flour in the school's cafeteria. Li obtained the arsenic after convincing a friend in medical school “to give her a blank, drug-order certificate”.⁹⁵ A case cited in some terrorism scholars' literature was discounted as it was not clear the exact nature of the incident. In this case, 15 Russians were killed and 53 reportedly injured from champagne purchased outside a Russian military base in Tajikistan which was allegedly tainted with cyanide. One report quotes an unnamed security official stating that the wine came from a licensed supplier, indicating that the contamination was intentional, while other reports note that locally-bottled liquor in the region is often unintentionally adulterated. The *BBC* translation of an *Interfax* (Russian) reports that the results of an investigation would determine whether this was a case of intentional adulteration of the champagne, or whether the accidental by-product of poor locally-manufactured and bottled champagne; no follow-up to the investigation has been found.⁹⁶

91 N. Cohen, “The Descent of the Poisoner”. *The Independent*(UK), 3 May 1989.

92 See Appendix 1.

93 C. Beynon et al., *Drink Spiking Report*, Centre for Public Health. Liverpool: John Moores University (June 2005); Model Criminal Code Officers' Committee of the Standing Committee of Attorneys-General (Australia), *Drink Spiking* (Discussion Paper), April 2006.

94 How different nations, agencies or local authorities define a “mass casualty incident” varies according to the capacity of their emergency responders and hospitals. For the purposes of this study, we define a mass casualty incident as one involving 100+ deaths or injuries. This does not imply that Singaporean authorities follow a similar definition

95 “More Than 500 Poisoned at Chinese School; No Deaths Reported”. *AP*, 21 June 1992; “Police Arrest Suspect In School Arsenic Poisoning”. *AP*, 28 June 1992; Police Say Expelled Student Put Arsenic In School Cafeteria”. *AP*, 3 July 1992; “Nearly 800 Chinese poisoned in woman's revenge”. *UPI*, 3 July 1992; “Chinese Student Attempts Mass Murder”. *Reuters*, 13 August 1992.

96 “Champagne kills 10 in Tadjikistan.” *UPI*, January 2, 1995; “Poisoned champagne kills 10 in Tajikistan.” *Reuters*, January 2, 1995; “Six Russian Soldiers Killed by Islamic Rebels in Tajikistan.” *Agence France-Presse*, January 3, 1995; “Death Toll Mounted Today in a Poisoning Case.” *Charleston Daily Mail*, January 3, 1995; Yuri Kushko, “Tajik rebels kill seven, take hostages in raid.” *Reuters*, January 3, 1995; “Death Toll in Champagne Poisoning Rises to 15.” *BBC Monitoring Service*, January 6, 1995; The Guardian (UK), “Tajik Struggle is Lethal Brew for Moscow,” February 11, 1995.

Some of the other mass or multiple casualty incidents are noted below:

- In 2002 in the town of Tangshan, near Nanjing, China, Chen Zhengping put the *Dushuqiang* brand rat poison, containing tetramine, into a rival restaurant's food. Earlier reports indicated that noodles and water were contaminated, although in the court case it was revealed that the actual items were "fried dough sticks, sesame cakes and glutinous rice". Forty-two died and 300 were hospitalized. There was wide-spread confusion over the number killed, as in the aftermath of the incident, conflicting reports put the death toll at anywhere from 38 to 102. While 38 is the commonly reported number of fatalities, official Chinese reports of the court case report 42.⁹⁷
- Twenty-eight died and 130 were injured in an incident in 2005. Ana Luyong sold cassava fritters laced with insecticide to a group of

schoolchildren in SE Philippines. Initially denying it, she said that the type of cassava used has a particularly high level of naturally occurring cyanide, but tests found *Coumaphos*, organophosphate insecticide on frying pans and cooking oil.⁹⁸

- Masumi Hayashi put arsenic into a curry she had prepared for a 1998 summer festival in Wakayama, Japan. Four people died and 63 were hospitalized. Hayashi was later also convicted for a 1995 insurance-scam murder in which she tainted a sweet-bean bun with monkshood herb (containing aconite).⁹⁹
- Two caterers feuding with school administrators put rat poison (most likely containing tetramine) in breakfasts they were serving at a school in Changde, China, in 2002, injuring 193 students and teachers.¹⁰⁰

97 "Breakfast snacks poison hundreds in south China". *Deutsche Presse-Agentur*, 15 September 2002; "Rat poison blamed for mass poisoning in China". *Deutsche Presse-Agentur*, 16 September 2002; K. Arms, "Suspected rat poison kills dozens in China". *UPI*, 16 September 2002; "102 die from food poisoning near Nanjing: source". *Japan Economic Newswire*, 16 September 2002; "At least 49 dead as China arrests rat poison suspect". *Deutsche Presse-Agentur*, 17 September 2002; Leow, J. "Rat poison found in food that killed 100 in Nanjing". *The Straits Times* (Singapore), 17 September 2002; J. Page. "Restaurateur confesses to poison deaths". *National Post* (Canada), 18 September 2002; "Suspect held in poison killings". *The Advertiser*, 18 September 2002; C. Joyce, "Poisoner to be Executed for Killing 38". *The Daily Telegraph* (London), 1 October 2002; "China Executes Mass Poisoning Culpit". *BBC Monitoring International Reports*, 14 October 2002.

98 "Cassava Vendor Denies Rap". *Philippine Daily Inquirer*, 3 May 2005; "Grieving Parents Collect Dead Children After Mass Poisoning in Philippines". *Agence France Presse*, 10 March 2005; M. W. Mosqueda Jr., & G. D. Kabling, "GMA Visits Bohol Victims". *The Manila Bulletin*, 11 March 2005; J. Manongdo, & M. W. Mosqueda Jr., "DoH Still Mystified by Mass Poisoning Tragedy in Bohol". *The Manila Bulletin*, 12 March 2005; J. Manon, "Vendor Admits Cooking White Cassava, Probers Eye Pesticide". *The Official Website of the Provincial Government of Bohol*, 13 March 2005, available at: www.bohol.gov.ph/news/news.php?newsid=95; "NBI: Pesticide Killed Bohol Kids". *Philippine Daily Inquirer*, 18 March 2005; G. Felongco, "Woman Faces Murder Charges in Schoolchildren's Death". *Gulf News*, 27 March 2005; Fuentes, C. A. "Mabini Moves On, But Scars of Mass Poisoning Deep". *Philippine Daily Inquirer*, 11 March 2006.

99 "New evidence in poisoning case—Arsenic found near Wakayama suspect's home". *Mainichi Daily News*, 10 October 1998; "Police discover arsenic in Hayashis' kitchen". *Mainichi Daily News*, 12 November 1998; M. Shinozaki, "Intoxication with Arsenic Mixed-in Curry in Wakayama", available at: pdm.medicine.wisc.edu/shinozaki.htm; information on an earlier murder: "4 people indicted over 1995 Saitama poisoning". *Japan Economic Newswire*, 13 December 2000; "Prosecutors seek life term in murder-for-insurance case". *Japan Economic Newswire*, 20 November 2001.

100 "China Arrests Two on Charges They Put Rat Poison in School Food, Sickening 193 Students and Teachers". *AP*, 12 December 2002

2.6 CONSUMER / HOME

Total Cases: 263
Agents used: Various (see below)
Fatalities: 265
Injuries: 670

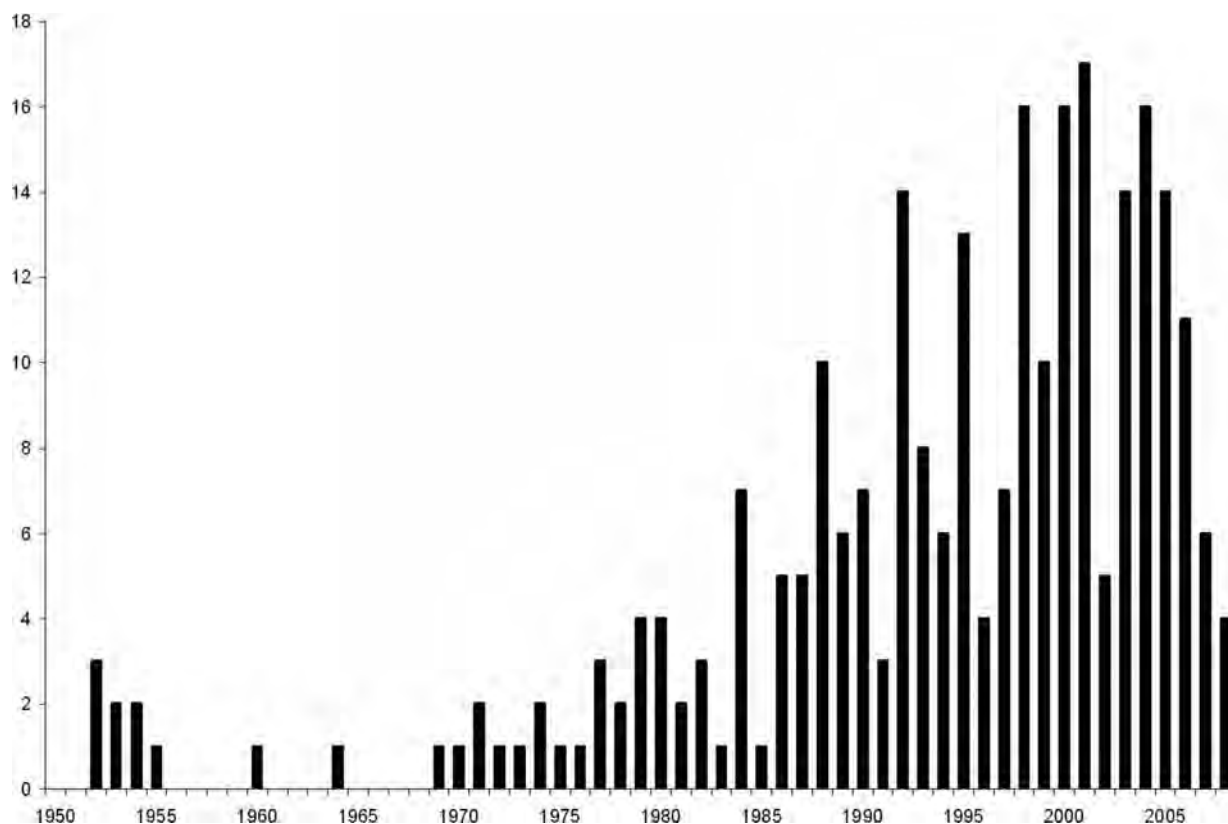


Figure 4: Annual Cases at the Consumer/Home node

It is at the very bottom of the food supply chain where we find the greatest number of cases, 75 per cent. Typically these involve a relative, neighbour,

acquaintance or co-worker attempting to harm a specific individual by contaminating food or beverages.

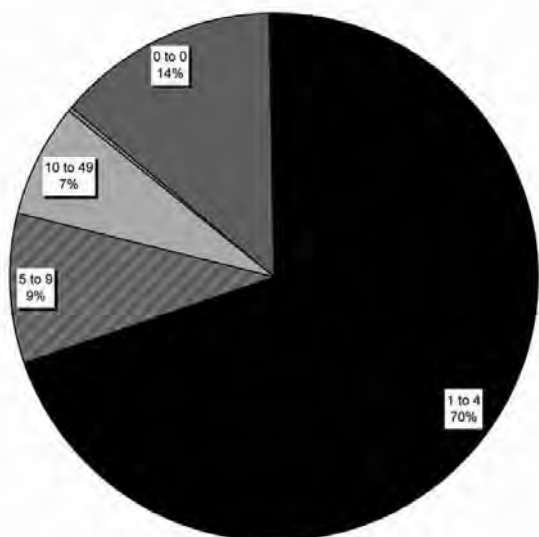


Figure 5: Casualties per incident at the Consumer/Home Node

The bulk of the cases resulted in less than five casualties; thirty-seven cases did not result in any casualties whatsoever. Of the seven per cent of cases with ten or more casualties (a total of 19 cases out of 264), four involved serial killers operating over a number of years.

Outside of an individual exhibiting a strong interest in poisons, these incidents may be much more difficult

for authorities to anticipate or prevent. Incidents at this end of the food supply chain may also occur more frequently. However, their impact is much less than if they were to occur at the retail/food service point of the food supply chain, with just 3.5 casualties per incident versus the 39 casualties per incident at the retail/food service point.

We found 67 various agents that were named in reports—many were simply listed as “unknown”. The list highlights the difficulty in research in this area; many of the reports list either the household product used in the incident, or the actual compound which caused the fatality. Therefore, “pesticide” is noted as an agent, as are parathion and paraquat, both of which can be components of pesticide. Similarly, “pharmaceutical drugs” tell us little and oftentimes police are hesitant to publicly release lab findings to the press, leaving the agent used to be noted as an “unknown poison”. It does confirm both the wide variety of readily available materials that in excessive quantities can harm us as well as, ultimately, their limitations as an agent that can cause harm to more than just a limited and targeted group of individuals.

A List of Agents Noted in Reports at Consumer Level

Acetone	Drano	Pilocarpine
Aconite	Ethylene Glycol	Hydrochloride
Ant poison	GBL	Polonium-210
Antidepressants	Herbicide	Potassium Cyanide
Antifreeze	Household cleaners	Potassium Sodium
Arsenic	Insecticide	Prescription Drugs
Arsenite	Iodine	Rat Poison / Rodenticide
Ascaris suum	Iodine-125	Ricin
Atropine	Lead	Salmonella typhimurium
Barium	Lye	Selenium
Bleach	Mercuric Chloride	Shigella
Chemical Herbicide	Mercurous Nitrate	Sodium Azide
Cleaning fluid	Mercury	Sodium Cyanide
Cleaning product	Methomyl	Strychnine
Copper Radiator Sealant	Narcotic	Sulfuric Acid
Copper Sulfate	Oleander	Temazepan
Cyanide	Painkillers	TCDD
Detergent/Bleach	Paint thinner	Tetramine
Diazepam	Paraquat	Thallium
Digoxin	Parathion	Typhoid Fever
Dimethyl Nitrosamine	Pesticide	Weed Killer
Disinfectant	Pharmaceutical Drugs	Xylazine
Drain Cleaner	Phosphorous-32 (P-32)	

2.7 BIOLOGICAL AGENTS

Total Cases:	9
Agents used:	Ascaris suum; Dysentery; Faecal matter; Hepatitis; Oleander; Ricin; Salmonella Typhimurium; Shigella; Typhoid Fever
Fatalities:	4
Injuries:	892

Of the 365 cases recorded, a total of nine involved the use of biological agents. All of these incidents occurred towards the lower end of the food supply chain—at the retail/food service (two incidents) or consumer points (seven incidents). Two incidents occurring in the workplace were both in hospital laboratories where the perpetrator had easy access to biological materials. Four fatalities occurred in a single case when Dr. Mitsuru Suzuki infected four of his colleagues with dysentery from an intentionally contaminated cake in Japan. Police investigations linked Suzuki to a number of typhoid and dysentery outbreaks at his place of work between 1964 and 1966.¹⁰¹

Despite press reports over the past few years of terrorist plots involving ricin, the sole case found in the study is that of Dr. Deborah Green, who was accused of

attempting to murder her husband by poisoning him with the substance. This also highlights perhaps the dubious nature of a “ricin threat”. It may simply be a case of the suspect grinding up castor beans into a powder form, which may be detected as ricin in tests, but be of too small a quantity to cause any harm.¹⁰² The Center for Nonproliferation Studies' *Chronology of Incidents Involving Ricin* notes that it is not clear if Green “extracted the ricin or merely added the beans to the food”.¹⁰³

The Rajneeshee group is often held up as the example *par excellence* of the potential biological threats when discussing food defence, cited as the only “instance in which a terrorist group operating in the United States employed a chemical or biological weapon” and “the only bioterrorism incident in which human illness has been verified”.¹⁰⁴ The incident itself was a result of “[Rajneeshee] commune members ... testing a plan to incapacitate in preparation for an upcoming election”.¹⁰⁵ Eighty-four per cent of the injuries from biological incidents involving food occurred in the Rajneeshee salad-bar incident and while it is commonly reported that this caused 751 injuries, it should be noted that only 45 people were temporarily hospitalized.

2.8 RADIOLOGICAL

Total Cases:	8
Agents used:	Phosphorous-32 (“P-32”); Iodine-125; Polonium-210
Fatalities:	1
Injuries:	36

Two of these eight cases occurred at home and one, the Litvinenko case, apparently occurred in a restaurant. The Litvinenko case stands out as it is the only

confirmed use of radiological material in a foodstuff used to kill an individual and it is the only case of the use of radiological material that in minute quantities could be considered fatal; the rest caused physical discomfort in some cases but at most, possibly raised the victim’s likelihood of getting cancer in the future. Our research found two unconfirmed cases occurring in Russia with similarities to the Litvinenko case.

101 For an excellent overview of the case, *Bioterrorism and Biocrimes* pp. 61–63

102 S. Waterman, “Experts: Ricin Terror Overblown”, *UPI*, 4 March 2008.

103 A. Lignitz, “Doctor-Mother Charged With Killing Two Children; Poisoning Husband”. 15 December 1995; *Chronology of Incidents Involving Ricin*, Center for Nonproliferation Studies, 3 February 2004, available at: cns.miis.edu/pubs/reports/ricin_chron.htm

104 *Bioterrorism and Biocrimes* p. 7.

105 T. J. Török, & R. V. Tauxe, et al., “A Large Community Outbreak of Salmonellosis Caused by Intentional Contamination of Restaurant Salad Bars”. *JAMA*, 278 (5) (6 August 1997), 393

Yuri Shchekochikhin, a Russian journalist, exhibited symptoms before his death that have led some to speculate he was poisoned with thallium or possibly polonium-210.¹⁰⁶ Roman Tsepov, the owner of a security company in Russia, an alleged leading St. Petersburg crime figure, and ex-bodyguard of Vladimir Putin, was allegedly poisoned with a substance suspected as being a “massive dose of a leukaemia drug” or polonium-210.¹⁰⁷

Five out of the eight cases occurred at laboratories that used radiological materials in their works. In all incidents, barring Litvinenko’s as far as one can tell, the perpetrator’s worked in scientific laboratories that either directly used the radiological material in their work or had ready access to it. However, it should be noted that in these cases the level of radiological contamination was about “equal to what you would get in a medical diagnostic procedure.”¹⁰⁸ We found no cases involving politically motivated criminals or terrorists acquiring radiological materials and using them to poison foodstuffs.

3. CONCLUSION

Some governments, as well as international organizations, worry that the intentional and malicious contamination of the food supply chain could cause mass casualties over a widespread area. The perception of such a threat is borne out in U.S. policy measures such as the *Public Health Security and Bioterrorism Preparedness and Response Act of 2002*, *Homeland Security Presidential Directive 7* and *Homeland Security Presidential Directive 9*, internationally in the food defence principles signed by all twenty-one member countries of APEC, and in statements by government officials (“I, for the life of me, cannot understand why the terrorists have not, you know, attacked our food supply because it is so easy to do”). What is not clear is if there is indeed a real threat to public health from the intentional and malicious contamination of food above and beyond ongoing concerns over food and water safety as well as food security.

In examining the historical record of such cases, we find that almost 98 per cent occur downstream in the food supply chain—at retail outlets, the home and workplace. The intentional and malicious contamination of the food supply chain most often occurs at the consumer level—in the home or workplace—but cases

occurring at the food service point of the food supply chain have had the largest impact on public health. Typically the agents used are commonly available household, agricultural, or industrial chemicals. Where more esoteric agents were used, the perpetrators often worked in a facility using such agents and had access and knowledge of their use. Even so, the public health impact from the sparse examples of biological or radiological cases is very small.

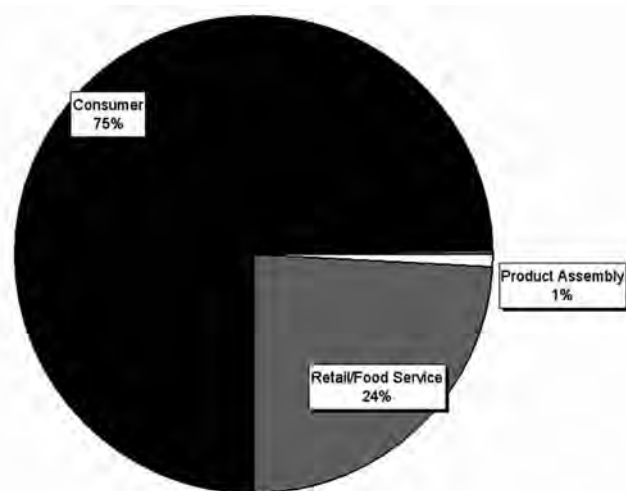


Figure 6: Incidents in Food Supply Chain (% of cases)

106 D. Rudakova, “Well-known Russian pro-democratic writer, MP dies aged 54”. *TASS*; 3 July 2003; “Yabloko: Special Commission to Investigate Deputy’s Death”. *RIA Novosti*; 3 July 2003; S. Gutterman, “Suspicious Cast on Russia After Poisoning”. *AP*; 14 December 2004; S. Gutterman, “Russian journalist believes colleague, Chechens poisoned with thallium”. *AP*; 21 November 2006; “How to Poison a Spy”. Panorama (Television Transcript), 24 January 2007, available at: news.bbc.co.uk/2/hi/programmes/panorama/6294771.stm; J. O’Hallaran, “Russia’s Poisoning ‘Without a Poison’”. *BBC News Online*, 6 February 2003, available at: news.bbc.co.uk/2/hi/programmes/file_on_4/6324241.stm

107 C. Gurin, “Roman Tsepov, R.I.P.” *Eurasia Daily Monitor, The Jamestown Foundation*, 27 September 2004, available at: www.jamestown.org/edm/article.php?article_id=2368580; “King of Shadows’ Poisoned”. *St. Petersburg Times* (Russia), 28 September 2004; V. Vyzhutovich, “One of the Legends of ‘St. Petersburg Underworld’ Dies Under Mysterious Circumstances”. *Moscow News* (Russia), 6 October 2004; S. Gutterman, “Poisoning of Ukrainian opposition leader draws attention to series of suspicious cases in post-Soviet Russia”. *AP*; 14 December 2004; J. Calvert, “The Putin bodyguard riddle”. *The Sunday Times* (London), 3 December 2006; P. Goodspeed, “One man dead, a world of mystery unleashed”. *National Post* (Canada), 9 December 2006; J. Calvert, and P. Ravina, “Litvinenko murder may be linked to mystery Russian poisonings”. *The Sunday Times* (London), 31 December 2006; “Russian radio pundits stress need for probe into journalist death in 2003”. *BBC Worldwide Monitoring*, 31 October 2007.

108 Felice J. Freyer, “Brown University grad student charged with poisoning fellow students with radioactive material in food”, *Providence Journal*, November 14, 1998

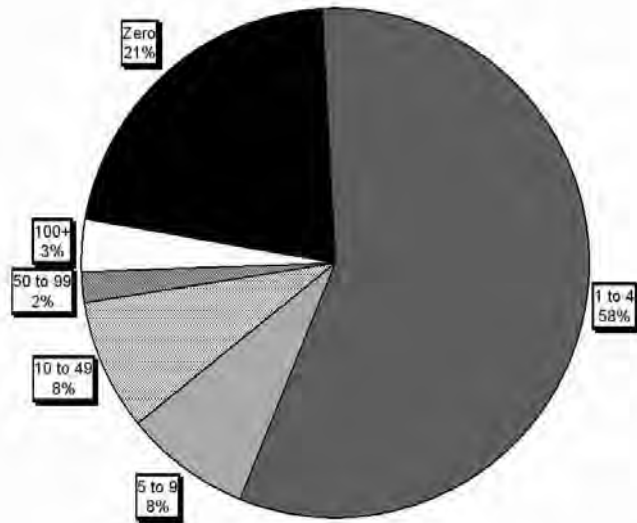


Figure 7: Casualties per incident (all cases)

Casualty figures are also low. Seventy-eight per cent have fewer than five casualties and only three per cent (twelve cases in total) could be considered “mass casualty incidents”. Incidents occurring at the retail/food service point of the food supply chain involved the heaviest casualties, with an average of 39 casualties per incident. Eleven out of the twelve mass-casualty incidents found occur at this point of the food supply-chain.¹⁰⁹ Such findings raise the question of whether food defence should be best handled internally by police, security and local health authorities as this is where one finds the largest incidents involving loss of human life or injuries.

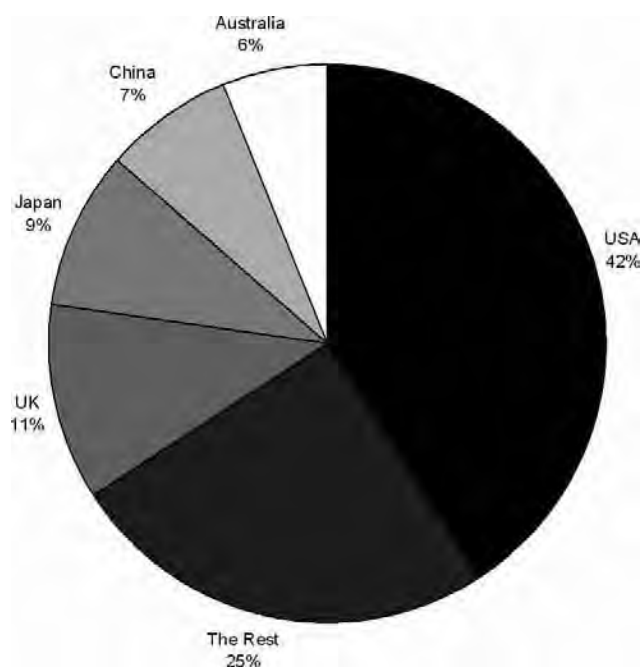


Figure 8: Percentage of total incidents based on countries

Cases from other countries (total number of incidents)

Austria	(1)
Bangladesh	(2)
Brunei	(2)
Cameroon	(1)
Canada	(6)
Colombia	(1)
Croatia	(1)
Cyprus	(1)
Denmark	(1)
Egypt	(1)
France	(2)
Germany	(5)
Ghana	(1)
Hong Kong	(6)
India	(2)
Indonesia	(2)
Iraq	(3)
Ireland	(1)
Israel	(8)
Italy	(3)
Jordan	(1)
Kuwait	(2)
Malaysia	(2)
Netherlands	(1)
New Zealand	(2)
Nigeria	(1)
Peru	(1)
Philippines	(5)
Romania	(1)
Russia	(3)
Singapore	(2)
South Africa	(3)
South Korea	(1)
Spain	(1)
Sri Lanka	(1)
Switzerland	(1)
Taiwan	(2)
Thailand	(4)
Turkey	(1)
Ukraine	(2)
Vietnam	(2)

¹⁰⁹ How different nations, agencies or local authorities define a “mass casualty incident” varies according to the capacity of their emergency responders and hospitals. For the purposes of this study, we define a mass casualty incident as one involving 100+ deaths or injuries. This does not imply that Singaporean authorities follow a similar definition.

Almost 60 per cent of the cases collected occurred in the United States, the United Kingdom and Australia (see figure 7), highlighting a bias in the study towards cases reported in the western media and, in the case of non-English speaking countries, a reliance on translated news items. For example, the first reported case in China is in 1992, and there is a steady, sporadically reported increase in confirmed cases of intentional, malicious poisonings, reaching their peak in 2003. This may represent a real increase, or merely

when the cases of *Dushuqiang* poisoning first came to the attention of the media. Certainly the Chinese government responded to the reported increases in deaths, instituting a campaign to stamp out the sale and distribution of the highly toxic *Dushuqiang* rat poison. Similarly, the decrease in cases in 2004 could indeed be due to the success of the government programme, or the success in filtering down publicly reported cases.¹¹⁰

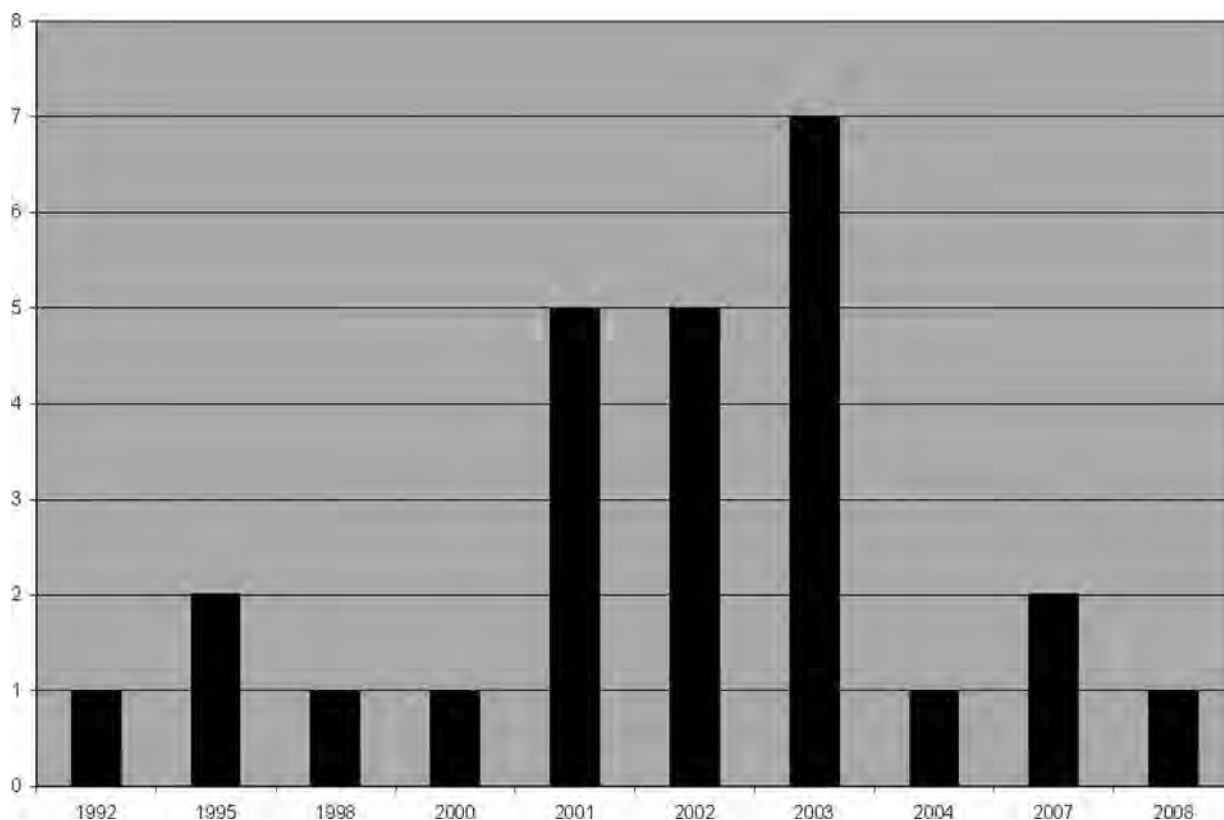


Figure 9: Incident in China per annum since 1992

110 "China winning fight against rat poison Dushuqiang". *People's Daily Online* (English language version), 5 March 2005. Available at: english.peopledaily.com.cn/200503/05/eng20050305_175661.html

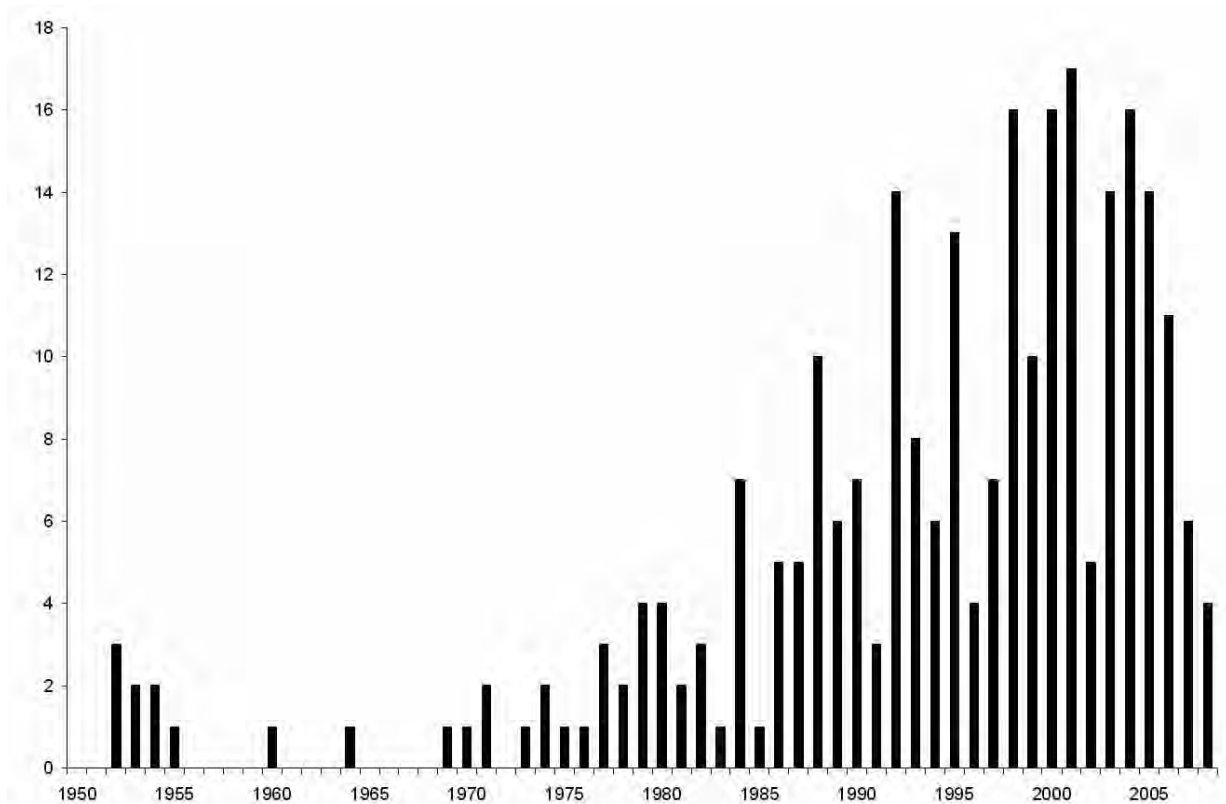


Figure 10: Incidents per annum (worldwide)

Similarly, when we look at the overall picture internationally, we see a sharp increase in the number of reported cases starting in the mid-1980s. This coincides with a large increase in extortion cases at the retail/food service point—as well as a large rise in copycat incidents, hoaxes and threats. Since 2004 there has been an annual decrease in reported cases. It is not clear if this increase in the 1980s and decrease after 2004 is due to actual changes in the amount of incidents or changes in media reporting.

In the United States, food borne illnesses resulting from food safety breakdowns are estimated to kill 5,000 and hospitalize 300,000 every year.¹¹¹ In Asia such illnesses account for an estimated 700,000 deaths per year while, worldwide, The World Health Organization estimates that, “food and waterborne diarrhoeal diseases ... [kill] approximately 1.8 million people annually”.¹¹²

This is in contrast to the *total* 391 fatalities and 4,355 injuries since 1950 from malicious food contamination; an average of six incidents per year resulting in an average of almost seven deaths and 75 injuries a year. Certainly an historical absence of evidence does not preclude suppositions that terrorists may intentionally contaminate the food supply “to cause widespread incapacitation and injury and/or effect terror and panic” from actually occurring in the future.¹¹³ What it does tell us is that “undertaking a major attack on the food supply chain is much more difficult than at first it may be believed”;¹¹⁴ that the most commonly used materials are also those easiest to acquire (e.g. pesticides and rat poisons)¹¹⁵ and that the retail/food service point of the food chain may be the most effective point in the food supply chain to cause more than just minimal casualties.

111 See “Food Safety Office”, Centers for Disease Control and Prevention, available at: www.cdc.gov/foodsafety/

112 Asia estimates from FAO *Newsroom*, “Food Safety at Risk in Asia and Pacific”, Food and Agricultural Organization of the United Nations, available at: www.fao.org/newsroom/en/news/2004/43073/index.html; Worldwide estimates from World Health Organization—Food Safety Programme, available at: www.who.int/foodsafety/en/

113 *Terrorist Threats to Food*, p. 5

114 *Defending Food and Drink*, PAS 96:2008, p. 2. British Standards Institution.

115 Controls on Pesticides—introduction of bad tastes, colours, etc.

Focussing on what terrorists *might* do to the food supply chain and putting policy measures in place to mitigate such perceived threats may assuage our fears at dying at the hands of our fellow man. Some of the goals of food defence policies may also ensure the economic viability of both small and large companies from being damaged by animal-rights militants and extortionists. The results of this study and recent incidents of melamine contamination suggest that a focus on terrorism in this domain may be misplaced.

Intentional contamination for economic gain (rather than for malicious goals) may be a larger threat to

public health in this area than that from terrorist organizations. One WHO scientist estimates there could be significant cases of illness and deaths from the “intentional contamination of foodstuffs such as the addition of prohibited substances to foods to mask poor quality or to extend the shelf life of foods that may be past their expiry date”.¹¹⁶ From a public health standpoint, the sparse data on food defence incidents in comparison to the impact of food safety incidents and the paucity of open-source information on the intentions of motivated non-state actors in this area, it is unclear what a focus on food defence over that of food safety brings to the table.

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APPENDIX 1: INTENTIONAL CONTAMINATION OF THE FOOD SUPPLY CHAIN, 1950 - 2008

Date	Agent	Place	Type	Deaths	Injury	Description / Reference
1952	Thallium	Australia	Chemical	0	1	While Veronica Mabel Monty admitted to poisoning her son-in-law, the rugby league star Bobby Lulham, she was acquitted at trial. ¹¹⁷
1952	Thallium	Australia	Chemical	1	0	Ruby Norton killed her daughter's fiancée. ¹¹⁸
1952	Thallium	Australia	Chemical	2	0	Yvonne Fletcher killed first husband in 1948 and the second in 1952 by putting a rat poison containing thallium ("Thall-Rat") in their food. ¹¹⁹
1953	Thallium	Australia	Chemical	0	1	Beryl Hague put rat poison containing thallium into her husband's tea. ¹²⁰
1953	Thallium	Australia	Chemical	4	3	Caroline Grills was another tea-spiking poisoner. ¹²¹
1954	Parathion	Germany	Chemical	1	0	Christa Lehmann laced chocolates with insecticide-containing parathion killing her neighbour's daughter and dog. [dog fatality not included in statistics] ¹²²
1954	Rat Poison	USA	Chemical	11	0	Nancy Hazle aka "Nannie Doss". A serial killer active between the 1920s - 1954, she used arsenic to kill four of her five husbands, her mother, two children, two sisters and a nephew. ¹²³
1955	Thallium	Australia	Chemical	1	0	Aileen Smith murdered her husband. ¹²⁴
1957	Thallium	West Germany	Chemical	0	1	Nikolai Khokhlov, a KGB agent who defected, had his coffee poisoned with thallium at a conference in Frankfurt; the KGB was suspected of involvement. ¹²⁵
1960	Pesticide	Japan	Chemical	2	0	Hiro Okubo killed her neighbour's husband and child by mixing pesticide in with the milk. ¹²⁶
1960	Thallium	Switzerland	Chemical	1	0	Poisoning of Cameroonian opposition leader Felix-Roland Moumie by an SCDE intelligence officer who placed thallium in his coffee and a pastry. ¹²⁷
1964	Typhoid Fever	Japan	Biological	4	120	Dr. Mitsuru Suzuki infected four of his colleagues with dysentery from an intentionally contaminated cake. Police investigations linked Suzuki to a number of typhoid and dysentery outbreaks at his place of work between 1964 and 1966. ¹²⁸
1969	Unknown Poison	Peru	Chemical	8	0	A man identified in newspaper reports as "M. Soto" kills himself and seven others who attended a dinner at his house. ¹²⁹
1970	Ascaris suum	Canada	Biological	0	4	Eric Kranz contaminated his roommates' food with parasitical <i>Ascaris suum</i> . ¹³⁰
1971	Thallium	UK	Chemical	3	70	Graham Young was a serial killer active from 1961-2, 1971. Antimony was used in earlier attacks. ¹³¹
1971	Arsenic	USA	Chemical	1	0	Judias Buenano poisoned her husband by lacing his food with arsenic. ¹³²
1972	Diphenylhydantoin	Germany	Chemical	0	12	On October 16, 1972, twelve US Army pilots reported symptoms associated with DPH poisoning. It was found that DPH, a medicine being used by an individual for epilepsy, was added to a pot of coffee shared by the pilots. The symptoms cleared over 24hrs. ¹³³
1973	Arsenic	USA	Chemical	1	0	Blanche Taylor Moore killed her first husband with arsenic (see 1986 and 1989). ¹³⁴
1974	Paraquat	UK	Chemical	1	0	Anne Marie Lindsay poisoned her husband by putting Gramoxone-brand herbicide in his dinner (containing paraquat) on July 4, 1974. ¹³⁵

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- 135 Raymond Fraser, "Stew with a deadly dash," *The Herald (Glasgow)*, July 5, 1995

APPENDIX 1: INTENTIONAL CONTAMINATION OF THE FOOD SUPPLY CHAIN, 1950 - 2008

1974	Cyanide	USA	Chemical	1	4	Ronald Clark O'Bryan murdered his son by putting cyanide in "plastic Giant Pixy Stix, a straw-like container with powdered sugar inside, in hopes of collecting \$30, 000 in insurance." ¹³⁶
1975	Arsenic	USA	Chemical	1	0	Audrey Marie Hilley murdered husband by lacing food with arsenic. ¹³⁷
1976	Thallium	USA	Chemical	3	1	George W. Hanei murdered his father and was implicated in earlier deaths. ¹³⁸
1976	Unknown Poison	USA	Chemical	0	0	Stephen Grant Morton placed tainted products on store shelves in Colorado Springs, CO, and Houston, TX. Also involved with sending live ticks and letter bombs over a two year period. ¹³⁹
1977	Atropine	France	Chemical	1	3	Roland Roussel doctored a wine bottle with atropine. ¹⁴⁰
1977	Arsenic	USA	Chemical	4	3	Velma Bullard Barfield gave rat and ant poison containing arsenic to four people. Placed in husband's beer and ice tea. In addition, she murdered her mother and two elderly people for whom she worked for using the same methods. ¹⁴¹
1977	Cyanide	USA	Chemical	2	0	Barbara Hoffman murdered one man in Dec, 1977 and another in March, 1978 in Madison, WI. Cyanide in food. ¹⁴²
1978	Mercury	Europe	Chemical	0	5	A group calling itself the "Arab Revolutionary Army-Palestine Command" injected mercury into oranges; oranges found in West Germany, Netherlands, and Sweden. The oranges were apparently poisoned at Rotterdam port. ¹⁴³
1978	Arsenic	USA	Chemical	0	1	Over a period of time, Patricia Distel poisoned her husband, Melvin Distel, in an attempt to kill him. She was arrested in 1979 after attempting to finish the job with a crowbar. ¹⁴⁴
1978	Dimethyl Nitrosamine	USA	Chemical	2	3	Steven Roy Harper stole the carcinogenic dimethyl nitrosamine from the lab where he worked and contaminated his neighbours' beverages. ¹⁴⁵
1979	Arsenic	Australia	Chemical	1	0	Emily Perry was alleged to have killed three others in the 1960s, but was never successfully prosecuted. ¹⁴⁶
1979	Arsenic	USA	Chemical	1	1	LaVerne O'Bryan killed her husband, John O'Bryan, by tainting coffee with arsenic, and poisoned her sister-in-law. Suspected of murdering a previous husband in same manner. ¹⁴⁷
1979	Mercury	USA	Chemical	0	0	"Four Isleton Elementary School students were convicted Monday in Sacramento County Juvenile Court of trying to kill teacher Winston Jones on April 24 because they were angry over failing grades. Authorities said the students admitted putting mercury from a thermometer in Jones' coffee thermos." Suspects unnamed. ¹⁴⁸
1979	Prescription Drug	USA	Chemical	0	1	"Two brothers, aged 14 and 17, and a 15-year-old boy were arrested for investigation of a possible conspiracy to poison Clarise Rogers, 50, operator of a licensed group home for boys in Sacramento. The brothers were accused of putting prescription drugs in the kettle Mrs. Rogers used to boil water for instant coffee." Suspects unnamed. ¹⁴⁹
1980	Unknown Poison	UK	Chemical	0	2	Two children of a Libyan expat living in England, Farag Ghesouda, were seriously injured after eating poisoned peanuts (the dog died) planted by a Libyan airlines employee in an assassination attempt. ¹⁵⁰
1980	Arsenic	USA	Chemical	3	1	Charles Albanese killed his father and injured his brother by lacing their cookies with arsenic; murdered his mother and mother-in-laws by putting arsenic on their desserts at a restaurant. ¹⁵¹

136 AP, October 31, 1977; John Harris Trestrail III, *Forensic Science and Medicine: Criminal Poisoning* (2nd Ed.), Humana Press.

137 *Telegraph (Australia)*, "Strange Twist to the Mystery of a Killer Housewife," March 2, 1987

138 *The New York Times*, "Illinois Man Guilty in Father's Death," January 23, 1978; AP, "Illinois' first woman elected coroner retires after 28 years", December 1, 2000; John Harris Trestrail III, *Forensic Science and Medicine: Criminal Poisoning* (2nd Ed.), Humana Press.

139 AP, July 15 1977

140 UPI, "Agatha Christie Book Underlined: Poisoner Inspired by Murder Tale," January 3, 1978.

141 AP, December 2, 1978; Dennis Patterson, "U.S. Supreme Court Chief Justice Stays Barfield Execution", AP, July 2, 1984; Kathy Sawyer, "Woman Executed for Murder; Death Row Granny' Dies in North Carolina", *The Washington Post*, November 2, 1984; Also named as "Velma Margie Barfield" in *The New York Times*, "Woman Scheduled to Die Dec.12," November 29, 1980

142 See: Max Haines, "Web of Deception," *The Toronto Star*, January 19, 1997; AP, "Double Murder Trial: Sex, Poison And Insurance Policies", June 26, 1980; AP, June 30, 1980.

143 Dusko Doder, "Terrorists Poison Israeli Oranges," *The Washington Post*, February 2, 1978; *The Globe and Mail (Canada)*, "Origin of fruit uncertain Germans find more tainted oranges", February 3, 1978; AP, February 3, 1978; *Time Magazine*, "Strange Fruits," February 13, 1978.

144 AP, October 15, 1979

145 AP, October 6, 1979; *The Washington Post*, "Rocket Fuel Poisoning," October 7, 1979; AP, November 8, 1979;

146 Graham Hunter, "New bid by Perry to avoid extradition", *The Advertiser*, January 15, 1986

147 AP, "Prosecution In Arsenic Murder Trial Rests Case", July 25, 1980

148 AP, June 6, 1979

149 AP, June 6, 1979

150 See: UPI, "Police fear children new target of Libyan death squad", November 13, 1980; *Reuters*, "A Libyan Is Charged in England With Trying to Kill an Expatriate", June 23, 1981.

151 UPI, "Businessman held in poisoning deaths of father, two in-laws," November 20, 1981; AP, "Businessman Convicted in Arsenic Murders," May 18, 1982; David Dishneau, "Man Executed for Killing Three Relatives with Arsenic," AP, September 20, 1995

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1980	Cyanide	USA	Chemical	0	3	3 Children in South Lake Tahoe, California became ill after drink kool aid spiked with cyanide. Reports are unclear if the kool aid package was tampered, or if the cyanide was directly administered into the mixed drinks. ¹⁵²
1980	Cyanide	USA	Chemical	0	0	Richard Quincy Williams placed cyanide in pickles and teriyaki sauce in at least two supermarkets in California as part of an extortion plot. ¹⁵³
1980	Rat Poison	USA	Chemical	0	2	In Marion County, Oregon, two brothers, 15 & 17 yrs old, attempted to kill their parents by putting rat poison and black gunpowder in their coffee. ¹⁵⁴
1981	Thallium	Israel	Chemical	0	3	Thallium poisoning by Stasi; Peter Haak (some reports put his name as Haack) laced meatballs with rat poison in order to kill Wolfgang Welsch, his wife, and two children. ¹⁵⁵
1981	Paraquat	UK	Chemical	1	0	Susan Barber poisoned her husband with a pesticide, Gramoxone, containing paraquat. ¹⁵⁶
1981	Unknown Poison	UK	Chemical	0	0	May 1981 - Jars of food contaminated in three stores in Northern England in an extortion plot. ¹⁵⁷
1982	Weed Killer	Japan	Chemical	1	8	At a farm co-op meeting in Gumma Prefecture, Masako Hayano laced whisky with weed killer. ¹⁵⁸
1982	Cyanide	USA	Chemical	1	0	A mafia hitman/serial killer, Richard Kuklinski put cyanide in the hamburger of Gary Smith. ¹⁵⁹
1982	Phosphorous-32 (P-32)	USA	Radiological	0	0	"Drops of a liquid, radioactive form of phosphorous, P-32, were found sprinkled on some candy and two pieces of bread... The candy was eaten by a secretary and the bread by a microbiologist. The amount they consumed was not considered dangerous, but both are being kept under medical supervision." ¹⁶⁰
1983	Cyanide	USA	Chemical	1	0	David A. Dowler killed Lisa Blythe Krieg, Texas, with cyanide. See 1986 for other incident. ¹⁶¹
1984	Arsenic	Australia	Chemical	1	0	Lorraine Alice Moss poisoned her husband, Leonard John Moss, of Bendigo (Australia), over a two-year period by putting arsenic in his food. ¹⁶²
1984	Strychnine	Germany	Chemical	0	2	Milan Nekuda, living in Australia, sent a box of chocolates to his aunt living in Germany. Her friend opened the chocolates and shared them with six people. Four spat them out. Of the two injured, one spent six days in a coma. ¹⁶³
1984	Insecticide	Japan	Chemical	0	0	Four cans of soft drinks found contaminated in the doors of four vending machines in Yokohama, apparently as part of an extortion plot (a newspaper received a letter in relation to the case). ¹⁶⁴
1984	Sodium Cyanide	Japan	Chemical	0	0	Four people, unnamed, were arrested in connection with the spiking of a bottle of soy sauce and one of vinegar at a restaurant in Tokyo. ¹⁶⁵
1984	Weed Killer	UK	Chemical	0	0	Animal Liberation Front activists injected into a turkey, weed-killer contained mercury at a store in Grimsby; threat called in. ¹⁶⁶
1984	Antidepressants	USA	Chemical	0	4	Susan Jo Barclay attempted murder of four children by mother. Put anti-depressants in the children's food. She then called medical personnel. ¹⁶⁷
1984	Arsenic	USA	Chemical	0	6	Michael Swango, working as a doctor, put arsenic-laced ant poison into co-workers snacks. Swango was suspected at the time in the deaths of 12 patients. Swango was under a constant cloud of suspicion, changing names, hospitals and even moving to Zimbabwe and Saudi Arabia. He was eventually tried and convicted of murder in 2000. He's suspected in the deaths of at least 30 people. ¹⁶⁸

152 AP, December 31, 1980; UPI, December 30, 1980; "New Tests Show Cyanide was in Kool-Aid Packet," AP, January 7, 1981.

153 AP, "Man Accused in Poison Pickle Extortion Scheme," April 4, 1980

154 AP, "Parents Say Sons Repeatedly Tried To Kill Them", February 2, 1980.

155 Deutsche Presse-Agentur, "German who attempted to poison family of three gets jail term", November 28, 1994

156 Max Haines, "Getting Rid of Michael," *The Toronto Sun*, January 9, 2000

157 See: Ruth Glendhill, "Poison Letter Not Seen for a Week," *The Times (London)*, July 2, 1987

158 *Mainichi Daily News*, "Waiwai - Princess of Poison", November 15, 1998

159 UPI, "Iceman' convicted in murders, will Appeal", March 17, 1988

160 UPI, "University says radiation exposure may be deliberate," February 23, 1982; UPI, "Contamination puzzles Brown officials," March 22, 1982; AP, "Brown Cited for Violations in Handling of Radioactive Materials," June 10, 1982

161 Holden Lewis, "Authorities Work To Assemble Murder Cases Against Seemingly Harmless Man," AP, November 8, 1987

162 *The Advertiser* (Australia), "Man given arsenic over period: doctor", August 21, 1986

163 Jenny Cooke, "Poison-Candy Man 'Threatened'", *Sydney Morning Herald*, February 3, 1988; *Courier-Mail (Australia)*, "Man Forced into Bid to Kill Aunt," February 3, 1988

164 AP, "Soft Drinks Containing Insecticide Found in Vending Machines," December 26, 1984

165 AP, "Charge Couple With Trying To Extort Money From Brewery," January 16, 1985.

166 Michael Morris, "Supermarket turkey injected with poison," *The Guardian (London)*, December 15, 1984; UPI, "Animal rights activists arrested for poisoning turkey", December 16, 1984

167 AP, "Mother Charged With Trying to Poison Children", June 28, 1984

168 See: Bob Springer, "Witness: Doctor Accused of Poisoning Snacks Dreamed of Gore" AP, April 23, 1985

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1984	Cyanide	USA	Chemical	1	0	Thomas Dresser was found dead in Manitowac having consumed a Coca-Cola that was tainted with cyanide. ¹⁶⁹
1984	Pesticide	USA	Chemical	0	0	A box of "Shake n Bake" was found to have been tampered at a store in Slidell, LA. Tests showed it had been contaminated with an agricultural pesticide called Disulfoton. ¹⁷⁰
1984	Salmonella typhimurium	USA	Biological	0	751	Members of the Rajneeshees cult poisoned salad bars at a number of restaurants. Carus has an excellent overview of the case and other incidents associated with the cult. ¹⁷¹
1984	Salmonella typhimurium	USA	Biological	0	2	Members of the Rajneeshees cult poisoned drinking water of two men. ¹⁷²
1984	Sulfuric Acid	USA	Chemical	1	0	Ricky Irby and Sheila Smith laced their infant's baby formula with sulfuric acid, apparently in an attempt to get money from the formula's manufacturer. The baby suffered extensive internal injuries and died 27 months later. ¹⁷³
1985	Cyanide	Japan	Chemical	0	0	Extortionist group/individual self-termed "The Man with 21 Faces" conducted an extortion campaign against Japanese sweets manufacturers, starting in 1984. On February 12, 1985, a number of chocolate bars spiked with cyanide were found in public areas in Tokyo and Nagoya. The group/individual concurrently sent letters to the manufacturers, threatening to poison more of their products if demands were not met. Newspaper reports indicate that at least some of the chocolate bars had been labelled by the extortionist(s) with poison warning stickers saying, "Danger, contains poison. You'll die if you eat this". At least five other packages of sweets were found labelled "Not poisoned". The individual/group threatened at least 30 food companies starting in 1984. ¹⁷⁴
1985	Cyanide	USA	Chemical	1	0	Walter L. Williams, a police officer, obtained cyanide from a vendor by telling them it was for official business, then used it to murder his wife. He was suspected in the death of his mother-in-law as well. ¹⁷⁵
1986	Rat poison	Australia	Chemical	0	0	Edward John Dowling placed various jars of baby food tainted with either rat poison or caustic soda on the shelves of supermarkets in Brisbane and Ipswich, Queensland, Australia between May 1985 and November, 1986. The extortionist phoned in a number of threats to local newspapers warning that he had placed random jars of tainted baby food in supermarkets. The campaign resulted in thousands of jars of baby food being pulled from shelves. ¹⁷⁶
1986	Cyanide	Japan	Chemical	0	0	Three cartons of milk and yogurt products were found in a Tokyo supermarket tainted with cyanide. Stickers on the product said, "Snow Brand causes death" (the manufacturer). The cyanide was injected into the cartons with a syringe. A letter was sent to the manufacturer demanding they withdraw their products from store shelves. ¹⁷⁷
1986	Insecticide	Japan	Chemical	0	0	Copycat group called "The Joker Bandits" left six chocolate bars in three supermarkets in Tokyo with stickers saying, ""danger, contains poison"" between March 24-27, 1986. Two were actually tainted with non-lethal doses of insecticide. The act was accompanied by an extortion letter to the manufacturer. ¹⁷⁸
1986	Arsenic (insecticide)	USA	Chemical	0	1	Myrle Rovenolt "a mother of eight who allegedly laced her husband's drinks with bug killer has been charged with attempted homicide, police said Thursday." ¹⁷⁹
1986	Arsenic	USA	Chemical	1	0	Joan Hensley Davis was charged with killing her husband by lacing his food with arsenic. No information if found guilty in court. ¹⁸⁰

169 AP, "Source of Poison in Death Case Sought", May 14, 1984

170 UPI, "Pesticide found in stuffing mix", May 8, 1984

171 Seth Carus, *Bioterrorism and Biocrimes: The Illicit Use of Biological Agents Since 1900*, Center for Counterproliferation Research, National Defense University, Washington, D.C., pp.50-58

172 Seth Carus, *Bioterrorism and Biocrimes: The Illicit Use of Biological Agents Since 1900*, Center for Counterproliferation Research, National Defense University, Washington, D.C., pp.50-58

173 Robert Lee Zimmer, "Parents Charged With Murder in Acid Poisoning of Baby", AP, June 2, 1989; *The New York Times*, "Father Is Found Guilty Of Poisoning Baby Son," May 22, 1990; UPI, "Mother gets 60 years for poisoning baby," July 20, 1990

174 See: AP, "Extortionists Leave At Least Two Cyanide-Laced Chocolate Bars", February 12, 1985; *Japan Economic Newswire*, "Extortionists Leave Poison-Laced Sweets in Tokyo, Nagoya", February 13, 1985; AP, "Valentine Chocolate Still Favored Despite Poison Threat," February 14, 1985; AP, "Extortionists Leave At Least Two Cyanide-Laced Chocolate Bars," February 12, 1985; UPI, "Extortion Group Poisons Chocolate Bars," March 31, 1986.

175 *Houston Chronicle*, "Policeman charged with bigamy, death by poison," 19 June 1985

176 *The Daily Telegraph (Australia)*, "Panic Over Baby Food," November 20, 1986; *The Daily Telegraph (Australia)*, "Baby Food Poison Arrest," December 18, 1986; *Courier-Mail (Australia)*, "Greed Baby Poison Motive: Crown," September 29, 1987

177 AP, "Cyanide Found in Yogurt, Coffee Drink," May 10, 1986.

178 UPI, "Extortion group poisons chocolate bars", March 31, 1986

179 UPI, "Mother of eight charged with poisoning husband", January 7, 1988

180 AP, "Woman Charged With Poisoning Husband", February 20, 1988

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1986	Arsenic	USA	Chemical	1	0	Blanche Taylor Moore. In 1986, killed her boyfriend. Serial poisoner killed two and injured one over a 16 yr period (see 1973 and 1989). ¹⁸¹
1986	Cyanide	USA	Chemical	1	0	Someone spiked a box of Lipton's Cup-A-Soup dry soup mix with cyanide, killing a customer. ¹⁸²
1986	Cyanide	USA	Chemical	1	0	David A. Dowler killed Juan Antonio Casillas with cyanide; Texas. See 1983. ¹⁸³
1986	Unidentified Substance	USA	Chemical	0	1	Glenwood D. Brogen, a student put unidentified liquid in teacher's coffee - possibly prank gone bad - liquid probably a cleaning solution. Teacher treated for 3rd degree burns to mouth and throat. ¹⁸⁴
1987	Sheep Dip	Australia	Chemical	0	5	Sheep dip was placed in the water supply of a Sydney rehabilitation centre for mental patients. ¹⁸⁵
1987	Unknown Poison	Japan	Chemical	0	0	In September, poisoned chocolates were found in 5 schools in Kagawa prefecture and in Tokushima schools. ¹⁸⁶
1987	Unknown Poison	Philippines	Chemical	19	140	Policemen on a run in Zamboanga were allegedly given water spiked with an unidentified poison. ¹⁸⁷
1987	Arsenic & Paraquat	UK	Chemical	0	0	June. Same store in Edinburgh as glass. - Cartons of grapefruit juice, yogurt, etc spiked with arsenic and paraquat weed killer. ¹⁸⁸
1987	Glass	UK	Physical Contaminate Agent	0	1	June. Ground glass put in coleslaw at Safeways, Edinburgh. ¹⁸⁹
1987	Glass	UK	Physical Contaminate Agent	0	0	July. Glass found in coleslaw at a Safeways in Glasgow, unclear if related directly to Edinburgh case. ¹⁹⁰
1987	Unknown	UK	Unknown	0	1	August. Man taken ill after eating tampered yogurt from an Asda in Reading. ¹⁹¹
1987	Atropine / Pilocarpine Hydrochloride	USA	Chemical	0	2	"Dr. [John] Buettner-Janusch sent one box of poison-laced candy to the Westchester County home of Chief Judge Charles L. Brieant, who had sent him to prison for his 1980 drug conviction. The judge's wife, Virginia, was hospitalized after eating some of the chocolates. Another box went to Dr. J. Bolling Sullivan, an associate professor of biochemistry at Duke University's marine laboratory in Beaufort, N.C. His wife, Ashley, and their daughter, Ann, became ill from the candy." Sent two other boxes to former colleagues. ¹⁹²
1987	Cyanide	USA	Chemical	0	0	"A Yugoslavian national and former Princeton University graduate student [Dragoljub S. Cetkovic] confessed today to putting a cyanide-laced tea bag in a Princeton Township supermarket last month...that he had placed the bag at the Super Fresh market on Feb. 10 and then called the store to tell employees about the tainted product." ¹⁹³
1987	Rat Poison	USA	Chemical	0	2	"Two teenage girls allegedly laced their parents' food with rat poison as part of a plan to run away from home "and make sure there was no one to follow them," authorities said Monday.. The Schaumburg girl allegedly laced her parents food with commercial rat poison for several days last week." ¹⁹⁴
1987	Rat Poison	USA	Chemical	0	0	"A 16-year-old west Marion County boy was arrested Thursday morning and charged with attempted murder for allegedly trying to poison a young woman he was infatuated with... The boy is accused of putting a pesticide called Co-ral into a partly full milk jug to poison a 23-year-old acquaintance." ¹⁹⁵

181 See, Paul Nowell, "Woman Convicted in Fatal Arsenic Poisoning," *AP*, November 15, 1990; *AP*, "Judge denies request for new trial for woman on NC death row," February 5, 2004

182 James Barron, "Jerseyan is Poisoned by Cyanide in Soup; Tampering is Cited," *The New York Times*, September 4, 1986; Mary Helen Gillespie, "Search Continues for Cyanide Killer," *AP*, September 6, 1986.

183 Holden Lewis, "Authorities Work To Assemble Murder Cases Against Seemingly Harmless Man," *AP*, November 8, 1987

184 Lisa Leff, "Maryland Student Charged With Trying to Poison Teacher," *Washington Post*, October 23, 1986

185 *The Telegraph (Australia)*, "Five Sick after Poison Attack," September 10, 1987

186 See: *AP*, "Poisoned Chocolates Found Near Playground", April 4, 1988

187 *The New York Times*, "Filipino Recruits Die; Poisoning Is Charged," September 7, 1987; Keith B. Richburg, "Poison Eyed In 19 Deaths In Philippines; 140 Other Soldiers Reportedly Taken Ill," *The Washington Post*, September 7, 1987.

188 See: *AP*, "Police Say Extortionist put Glass and Poison in Food," August 15, 1987. Also: "The contaminated containers bore red warning stickers," *The Times (London)*, "Stores alert after glass and poison found in food," June 22, 1987

189 See: Ruth Glendhill, "Poison Letter Not Seen for a Week," *The Times (London)*, July 2, 1987; *AP*, "Police Say Extortionist put Glass and Poison in Food," August 15, 1987. Also see: "The contaminated containers bore red warning stickers," *The Times (London)*, "Stores alert after glass and poison found in food" June 22, 1987. More attacks? : FIND - "Safeway is the third victim this year of supermarket poison plots. Sainsbury's and Marks and Spencer were the other victims." *The Times (London)*, "Stores alert after glass and poison found in food" June 22, 1987

190 See: *AP*, "Police Say Extortionist put Glass and Poison in Food," August 15, 1987

191 See: *AP*, "Police Say Extortionist put Glass and Poison in Food," August 15, 1987

192 Arnold H. Lubasc, "Poison Candy Brings 40-Year Prison Term", *The New York Times*, July 15, 1987.

193 *The New York Times*, "Ex-Princeton Student Held In Cyanide-Tampering Case", March 24, 1987

194 *UPI*, "Teens plot to poison parents," February 2, 1987

195 *St. Petersburg Times (Florida)*, "Boy charged with attempted murder", December 11, 1987

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1987	Various	USA	Chemical	24	0	A serial killer, Donald Harvey was charged with 24 homicides over a 15 yr period, but confessed to 50 (some accounts say 70). Various methods were used, but included lacing food and drink of his victims with cyanide or arsenic. In one case he gave his neighbour coffee laced with a hepatitis bacterium. ¹⁹⁶
1988	Strychnine	Australia	Chemical	1	0	Maxine Byram laced a can of beer at a party. ¹⁹⁷
1988	Unknown Poison	Italy	Chemical	0	0	Grapefruit in the Rome region were found to be injected with a poison. Grapefruit allegedly from Israel. ¹⁹⁸
1988	Potassium Cyanide	Japan	Chemical	0	0	March 24: Police found 21 tainted chocolates at a school near Itano. ¹⁹⁹
1988	Unknown Poison	Japan	Chemical	0	0	Three pieces of poisoned chocolate were found near a shrine and a playground. ²⁰⁰
1988	Unknown	Sri Lanka	Chemical?	7	0	"A widow killed seven of her children and committed suicide in northern Sri Lanka after she was harassed for money by two sons-in-law, a newspaper reported Friday... The Sun newspaper did not give the identity of the woman but said she fed her children poison." ²⁰¹
1988	Thallium	UK	Chemical	1	0	Abdullah Rahim Sharif Ali was allegedly poisoned by thallium put in his food by Iraqi intelligence agents in London. ²⁰²
1988	Arsenic	USA	Chemical	0	1	Flora Crittenden poisoned her husband, James Crittenden, over several years by spiking his food with arsenic. ²⁰³
1988	Arsenic / Lead	USA	Chemical	0	0	Mentally disturbed woman, Laurie Dann, in Winnetka, IL., sent 29 packets of juice and food, contaminated with arsenic or lead, to various people before going on a shooting rampage killing a child and injuring six others before shooting herself. ²⁰⁴
1988	Cyanide / Needles	USA	Chemical	0	0	Possible extortion. Over a period of days, cartons of juice were found in three supermarkets with syringe needles in the cartons, and stickers warning of poison. Tests for cyanide were inconclusive. ²⁰⁵
1988	Insecticide	USA	Chemical	0	0	"A 13-year-old girl, who police say last week put roach poison in her mother's soup, was arrested Thursday and charged in the incident." ²⁰⁶
1988	Lye	USA	Chemical	0	0	"Three girls accused of conspiring to kill an assistant principal by putting lye in his coffee... On Feb. 25, Vice Principal Robert Espelien became suspicious when he saw a brownish-tan substance, which tests later showed was lye, floating in his coffee cup. Espelien did not drink the coffee." ²⁰⁷
1988	Thallium	USA	Chemical	1	2	George J. Trapal placed thallium-containing rat poison in the coke bottles of a neighbour. ²⁰⁸
1989	Parathion	Israel	Chemical	0	2	The employee, Ziad Tumar, of a falafel stand in Jerusalem laced the cabbage of a falafel sandwich with insecticide containing parathion. Two men fell ill, one seriously. ²⁰⁹
1989	Sarin / VX	Romania	Chemical	0	5	During the uprising against the Ceausescu regime elements of the security services poisoned the water supply of the town of Sibiu using VX and Sarin. Reports vary on casualties - some say "Several were taken to hospital, and four lapsed into comas" while others put serious injury at five persons. ²¹⁰
1989	Cleaning fluid	UK	Chemical	0	0	Lan Tchiang sent her husband's lover a bottle of wine spiked with cleaning fluid. The woman noticed the seal was broken and did not drink the wine. ²¹¹

196 John Nolan, "Former Nurse's Aide Sentenced for Mass Killings," *AP*, August 18, 1987; David S. Hizenrath, "Orderly Served Death to Patients," *The Washington Post*, August 21, 1987.

197 *Courier-Mail (Australia)*, "Life Jail for Poison Murderer," May 16, 1989

198 *The Globe and Mail (Canada)*, "Roman Grapefruit contained poison," April 27, 1988

199 See: *AP*, "Poisoned Chocolates Found Near Playground", April 4, 1988

200 *AP*, "Poisoned Chocolates Found Near Playground", April 4, 1988

201 *AP*, "Mother Kills Seven Children and Commits Suicide", December 16, 1988.

202 Stewart Tendler and Hazhir Teimourian, "Death squad fears after poisoning of Iraq exile", *The Times (London)*, January 22, 1988; Stewart Tendler, "Secret agents suspected of poisoning," *The Times (London)*, January 23 1988; Stewart Tendler, "Poisoned Iraqi 'a spy for Baghdad", *The Times (London)*, February 3 1988.

203 *AP*, "Husband Poisoned By Wife Asks Judge To Free Her", September 14, 1988; *AP*, "Wife Sentenced To Probation In Poisoning of Husband", October 29, 1988

204 See: *AP*, "The Tragedy of Laurie Dann: 'She Wasn't the Monster She Turned Out to Be'", July 12, 1988

205 See: *AP*, "Police Find Third Orange Juice Carton Tampered With in Los Angeles Area", July 7, 1988.

206 *St. Petersburg Times (Florida)*, "Girl charged with poisoning mother's soup", March 6, 1988

207 *AP*, "Junior High Girls Admit Trying To Give Poison To Vice Principal", May 3, 1988

208 Leslie Brody, "Three Apparently Drank Poison," *St. Petersburg Times (Florida)*, December 7, 1988

209 Robert Rees and Judy Siegel, "J'Lem Restaurant Owner, Arab Employees Questioned after Serving Poisoned Falafel," *The Jerusalem Post*, December 22, 1989; Herb Keinon, "Restaurant Reopens After Employee Confesses to Poisoning," *The Jerusalem Post*, January 5, 1990

210 Peter Green, "French team confirms poison in water supply", *UPI*, December 29, 1989; William B. Ries, "Romania sheds decades of totalitarian rule," *UPI*, December 29, 1989; James Adams, "Securitate's poison secret discovered," *The Sunday Times (London)*, February 4, 1990

211 Alan Dearn, "Poison 'Gift to Mistress'", *The Herald Sun*, November 27, 1990

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1989	Glass	UK	Physical Contaminant	0	5	"Heinz and Cow & Gate in Britain report 220 cases of tampering with baby food after five babies are treated in hospital. Glass and razor blades are found in the products and stores withdraw them from their shelves." There were a rash of tamperings in 1989, and its unclear how many were perpetrated by criminals, self-tampering, or people who simply believed their food was tampered with. ²¹²
1989	Rat Poison	UK	Chemical	0	1	Andrew Day tried to poison his wife by putting rat poison on her toast. ²¹³
1989	Selenium	UK	Chemical	1	0	A report in BMJ tells how a man was systematically poisoned by selenium in his food administered by his girlfriend over a period of many months. ²¹⁴
1989	Unknown Poison	Ukraine	Unknown	8	18	A serial poisoner, Tamara Ivaniutina over a number of years poisoned her husband, her in-laws during a meal, and a teacher and a number of students while working as a dishwasher at a local school in Kiev. ²¹⁵
1989	Arsenic	USA	Chemical	0	1	Blanche Taylor Moore. Second husband poisoned with arsenic; injured. ²¹⁶
1989	Cyanide	USA	Chemical	0	1	A member of a cleaning crew at FDA, Hector Cabassa, stole cyanide from a lab and put it in a water cooler in an attempt to kill his boss. Another co-worker became violently ill after drinking the water. ²¹⁷
1989	Rat Poison	USA	Chemical	0	1	Tammie L. Smith fed her 2 yr old son rat poison in his cereal and ice cream. ²¹⁸
1990	Prescription Drug	Australia	Chemical	0	1	Samantha Carr, a nursing assistant, "ground up a potentially lethal cocktail of tablets to give her patient in tea or over her food." ²¹⁹
1990	Insecticide	Israel	Chemical	0	2	Two children were sickened after drinking insecticide-laced tap water; the water tank on top of their apartment building had been tampered with. Authorities found a second water tank also tampered with. ²²⁰
1990	Parathion	Israel	Chemical	0	1	A disgruntled employee at the Health Ministry in Jerusalem, Fuad Assila, put parathion into a bottle of milk at his workplace. One co-worker was injured. ²²¹
1990	Thallium	Japan	Chemical	1	0	Masahiro Ito put 25 grams of thallium acetate into the coffee of his co-worker, Ryoichi Nakamura in mid-December of 1990. Nakamura died February 14, 1991. Ito had attempted on numerous occasions, unsuccessfully, to poison Nakamura. Ito and Nakamura were engineers at an animal testing facility at a university and had access to the thallium acetate. ²²²
1990	Unknown	Netherlands	Chemical	1	5	Six people at an Amsterdam nightclub had their drinks spiked. "Dutch newspapers quoted hospital staff as saying the poison choked victims and made them hallucinate and foam at the mouth." ²²³
1990	Cyanide	UK	Chemical	1	0	"A prostitute obsessed with cyanide was starting a life sentence today for the motiveless murder of a man she hardly knew. Tricia O'Mahoney, 38 - whose lover supplied her with enough of the poison to kill 200 people - watched businessman Glyn Cooper die in agony on her kitchen floor after giving him cyanide-laced coffee." ²²⁴
1990	Rat Poison	UK	Chemical	0	1	Ronald Wiles "laced his 12-year-old stepson's steak pie with canary seeds covered in rat poison." ²²⁵
1990	Cyanide	USA	Chemical	0	0	"Snack food apparently laced with cyanide was delivered to the homes of six workers at Oak Ridge National Laboratory.... No one has been harmed by the poisoned popcorn and peanuts left in mailboxes and newspaper boxes on Thursday and Saturday." ²²⁶

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1990	Rat Poison	USA	Chemical	0	2	"A 14-year-old girl took revenge on two playmates by inviting them to a picnic and serving them a peanut butter and jelly sandwich and grape drink laced with poison, police say... An 11-year-old girl had a stomach ache after taking several bites of the sandwich and a 9-year-old vomited after sipping the drink, police said." ²²⁷
1991	Pesticide	Israel	Chemical	0	1	Several jars of Gerber baby food were found contaminated with a pesticide containing Methomyl. One baby was injured. ²²⁸
1991	Insecticide	Japan	Chemical	0	0	A person or persons calling themselves "Heavenly Heart" apparently injected insecticide into a number of food products in an extortion attempt. On February 6, "police found three chocolates laced with agricultural chemicals in a supermarket in the Chiba prefecture, near Tokyo." In another related incident, police found "15 chocolates and sweets with farm insecticides in Tokyo... Police believe the same group or person is responsible for poisoning bottled vegetable juice at another supermarket." ²²⁹
1991	Pesticide	Japan	Chemical	0	0	Two packs of poisoned Yakult drinks were found at a store near Tokyo, after an extortionist called the manufacturer with a warning. ²³⁰
1991	Rat Poison	UK	Chemical	0	0	James Rodwell sprinkled rat poison on a package of ground meat at a supermarket, placed a red sticker on it, then called the store manager in an extortion attempt. The rat poison he used was allegedly harmless to humans. ²³¹
1991	Mercuric Chloride	USA	Chemical	0	5	Gary Kosowsky, a teacher, gave five of his colleagues chocolates injected with mercuric chloride, a toxic chemical used in pesticides. ²³²
1991	Rat Poison	USA	Chemical	0	0	William Greene's ex-wife [Jetta Greene] broke into his house and sprinkled rat poison into his oatmeal. Greene saw suspicious brown particles and did not eat the oatmeal. ²³³
1991	Strychnine	USA	Chemical	0	1	A woman in West Virginia was hospitalized after drinking a can of tampered soda she bought from a vending machine. The can had been injected with strychnine. ²³⁴
1991	Thallium	USA	Chemical	1	0	Joann Curley, killed Robert Curley, husband, by giving him thallium-containing rat poison on over a dozen occasions. ²³⁵
1991	Unknown Poison	USA	Chemical	0	1	A dozen jars of baby food were tampered with and contaminated, leading to serious injury in one baby. The tamperings appeared to be limited to a single store. ²³⁶
1992	Paraquat	Australia	Chemical	1	0	Patricia Robertson murdered her foster son (whom she suspected of being a paedophile) by putting concentrated weed killer in some green ginger wine. ²³⁷
1992	Strychnine	Australia	Chemical	0	1	Kerry Henry Hewitt put strychnine crystals into the sugar for a woman's coffee at his apartment. ²³⁸
1992	Radioactive phosphorous-32 (P- 32)	Canada	Radiological	0	1	In 1992, a Toronto man, Qing-Huai Zhu, was convicted for taking a small amount of radioactive material from a hospital where he worked and contaminating his roommate's food. ²³⁹
1992	Arsenic	China	Chemical	0	788	Li Yuan was expelled from her university. To take revenge she broke into the kitchen and arsenic into the school's flour. Reports differ as to quantity - one report states 2lbs, the other 350 grams. Additionally, earlier reports put the identity of Li as a man, while later changes it to female. ²⁴⁰
1992	Thallium	Iraq	Chemical	0	2	Abdallah Abdelatif and Abd al-Karim al-Masdiwi. The ex-Iraqi army officers were poisoned with thallium (either in Iraq or Syria). They were granted visas in Damascus and flown to UK for treatment. ²⁴¹

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1992	Insecticide	Israel	Chemical	1	0	A wife [Kochava Levy] and neighbour [Hadara Yahav] killed her husband by poisoning his drink with insecticide. This followed two previously unsuccessful attempts over the previous fortnight to kill him by mixing rat poison, in the first attempt, and insecticide, in the second, into his meals. ²⁴²
1992	Rat Poison	Israel	Chemical	0	0	Rashid Zada "sprinkled rat poison on ground meat and injected bug spray into watermelons, vegetables and chicken soup mix." No one was injured in these incidents due to the small amount of poison used. ²⁴³
1992	Pesticide	Thailand	Chemical	2	0	Sanong Jankooong laced fried noodles with pesticide, killing two children. Report notes more were injured, but does not give a number. ²⁴⁴
1992	Potassium Cyanide	Turkey	Chemical	0	0	The PKK put cyanide into the water tanks of a Turkish airbase. Officials say they found two 25lb empty boxes of cyanide near the tank. ²⁴⁵
1992	Arsenic	UK	Chemical	1	0	Mohammed Azam, Bradford, poisoned by his girlfriend, Zoorah Shah, via arsenic in his meal. ²⁴⁶
1992	Prescription Drug	UK	Chemical	0	3	Francis Murtagh laced sherbet sweets with crushed up prescription drugs (Depression/Blood Pressure). ²⁴⁷
1992	Rat Poison	UK	Chemical	0	0	Two youths, 14 and 15, at an Edinburgh children's home put rat poison on food at the home. The poison was noticed by a social worker. The quantities may not have been large enough to harm anyone. ²⁴⁸
1992	Antifreeze	USA	Chemical	1	0	Bobbie Jan Nicholson gave her husband a drink spiked with antifreeze. ²⁴⁹
1992	Arsenic	USA	Chemical	1	0	Georgia Weaver slowly poisoned her sister over a period of time by lacing her food with arsenic. "The label on the bottle of Cowley's Original Rat and Mouse Poison says it is 98 percent arsenic trioxide." ²⁵⁰
1992	Drain Cleaner	USA	Chemical	0	0	"A man [Terry Paul Pavlu] accused of mixing a lunch of mistletoe berries, drain cleaner and spaghetti for his wife is being tried for attempted murder." ²⁵¹
1992	Insecticide	USA	Chemical	0	1	Elizabeth Fuentes Ortiz put insecticide into her husband's milkshake, putting him into a coma. ²⁵²
1992	Thallium	USA	Chemical	0	5	Filip Semey sent marzipan tainted with rat poison containing thallium to two students. Five women were injured after eating the marzipan. ²⁵³
1993	Rat Poison	Australia	Chemical	0	2	Peter Dwyer poisoned his wife and his lover's husband over a period of five months by slipping rat poison into their coffee. ²⁵⁴
1993	Sewing Needles	Australia	Physical Contaminant	0	0	"Sewing needles are found in three packets of Samboys crisps and CCs sold in Tasmania and Victoria." ²⁵⁵
1993	Rat Poison	Cameroon	Chemical	15	12	"A man's [Pierre Wazan] attempt to poison his uncle following a family row left 15 people dead and 12 hospitalized in serious condition... After an argument with his uncle, Wazan put rat poison into a peanut sauce his aunt was preparing Saturday in the northern Mindil area of this central African nation, police said. But his aunt used the sauce, a common base for African dishes, to prepare food she sold at an outdoor market. The uncle didn't eat any of it." ²⁵⁶
1993	Digoxin	Canada	Chemical	0	1	Maria Boniello laced her husband's food with the heart drug Digoxin over a two-year period. ²⁵⁷

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1993	Various	Croatia	Chemical	0	1	36 Canadian troops stationed in Croatia attempted to poison an NCO's "coffee and food during his seven-month tour with a cocktail of toxic substances, mostly boot polish, naphtha gas, fly repellent, antifreeze, laxative and battery acid." ²⁵⁸
1993	Acetone	Cyprus	Chemical	0	0	Maria Martin, the wife of a grocer, went to a competing store and was caught trying to sprinkle acetone on foodstuffs. ²⁵⁹
1993	Rat Poison	Israel	Chemical	0	1	The sister-in-law of a police informer, Bahader Abu Hatzera, put rat poison in his coffee. ²⁶⁰
1993	Unknown Poison	Philippines	Chemical	3	25	Philippines troops overran a MILF village in Salama, and became sick after drinking from a well poisoned by retreating MILF rebels. ²⁶¹
1993	Barium	USA	Chemical	1	0	Marie Robards stole barium from her high school chemistry lab and placed it in her father's meal. ²⁶²
1993	Cyanide	USA	Chemical	1	0	Police believe someone spiked Julien Balogh's coffee with cyanide. No further information could be found of the result of police investigation. ²⁶³
1993	Xylazine	USA	Chemical	0	5	Stanley Zukowski placed the animal tranquilizer in his children's drinks. ²⁶⁴
1994	Rohypnol	Hong Kong	Chemical	0	10	Between July 19 2004 and February 20, "[Kwok Yuk-ho] injected 10 containers of Vita lemon or chrysanthemum tea with the sleeping drug Rohypnol... He would shadow his victims after they had bought the doctored drinks from 7-Eleven or Circle K convenience stores until the drug began to take hold. Their wallets would then be taken." ²⁶⁵
1994	Thallium	Iraq	Chemical	0	1	Name is put as "Safa al-Battat" and "Saba Al Batat." "A former special forces officer who became a guerrilla leader is being treated for thallium sulphate poisoning in Britain. Major Safa al-Battat, 31, fell ill in December after a visit to his headquarters in Kurdistan... Another member of the opposition Iraqi National Congress died from the poison last Saturday, according to an Iraqi source." ²⁶⁶
1994	Atropine	UK	Chemical	0	9	Dr. Paul Agutter spiked bottles of tonic water to cover up murder attempt on wife. 55,000 bottles recalled. ²⁶⁷
1994	Bleach/Painkillers	UK	Chemical	0	1	A disturbed 13yr old repeatedly poisoned her mother on at least seven occasions using painkillers, and on one occasion bleach, mixed in with her food and drinks. ²⁶⁸
1994	Pharmaceutical Drugs	UK	Chemical	1	0	Dena Thompson crushed antidepressants in her husband's curry and aspirin in his drinks in order to murder him on his birthday. ²⁶⁹
1994	Sodium Azide	UK	Chemical	0	2	Angus Lamb, returning to Scotland after serving a four year sentence for robbery in Canada, spiked the sugar bowl at his family's home with Sodium Azide in an attempt to flee the country with the family's car and valuables. "Lamb had previously worked in a company where there was access to the chemical and it had been in the house for a long time." ²⁷⁰
1994	Cyanide	USA	Chemical	1	0	Michelle Barrett poisoned her husband by spiking his orange juice with cyanide. ²⁷¹
1994	Rat Poison	USA	Chemical	0	1	Shirley Lee Barksdale poisoned her husband on a number of occasions in May and June 1994 using rat poison in order to marry a younger man. ²⁷²
1995	Rat Poison	Bangladesh	Chemical	2	0	Halima Begum and Panna Bibi mixed rat poison into the meals of family members. ²⁷³
1995	Paraquat	Brunei	Chemical	2	0	Wong San Nee killed her two children by putting paraquat into their drinks. ²⁷⁴

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1995	Rat Poison	China	Chemical	18	163	Du Runqiong and Tang Youhua, in addition, killed 3100 chickens, 243 pigs, 300 fish, 10 oxen over a period of months. "Du said she started her crusade to "cleanse the world" in June by killing the oxen, pigs, all the fish in local ponds and the thousands of chickens...Du said she crept about at night, spreading poison over vegetables in farms. The sight of people eating at a porridge shop prompted her to pour 10 bottles of poison into the gruel for three days in a row. Two people had died and 38 were hospitalized by September... She admitted sneaking into 20 homes and smothering cooking ingredients with poison. In November, she said she purchased more poison and wandered around the food markets in the village of Jinli, spreading lethal doses over meat cutting boards and sausages. Police found hidden stores of poisoned rice and tea in her home when they arrested her last month." ²⁷⁵
1995	Thallium	China	Chemical	0	1	Zhu Ling was poisoned by thallium, a case which baffled doctors until her classmates sent emails to various Usenet groups asking for assistance. ²⁷⁶
1995	Aconite	Japan	Chemical	1	0	Convicted: Shigeru Yagi, Mayumi Take, Takako Morita. The three killed Shuichi Sato in an insurance scam by feeding him a sweet-bean bun spiked with monkshood herb (which contains aconite). ²⁷⁷
1995	Insecticide	Kuwait	Chemical	0	1	Two Sri Lankan maids, angry at being mistreated by their employer, put insecticide in the employer's baby's food on two occasions. ²⁷⁸
1995	Cyanide	Singapore	Chemical	0	10	Sugar was contaminated with cyanide at National University of Singapore (NUS) Chemistry Dept. No suspect was ever found. ²⁷⁹
1995	Weed Killer	UK	Chemical	0	1	Peter Tyrell put poison in a co-worker's orange juice and coffee. Sodium chlorate weed killer. ²⁸⁰
1995	Antifreeze	USA	Chemical	1	0	Lynn Turner was convicted of killing her husband, apparently by putting antifreeze in his Jell-O. ²⁸¹
1995	Copper Sulfate	USA	Chemical	0	1	A 14 yr old boy in Kansas put the copper sulfate crystals in his teacher's coffee. ²⁸²
1995	Herbicide	USA	Chemical	0	0	Bradley Allen Puthoff snuck into a co-worker's apartment in Sioux Falls, SD, and put Roundup-brand herbicide in a family of three's "cottage cheese, applesauce and juice". Reports say dosages were not at a fatal level. ²⁸³
1995	Insecticide	USA	Chemical	0	0	Donald William Bradley laced a box of Rice-a-Roni, marked it with a red dot, placed it in a supermarket and called the manager in an extortion attempt. Testing found it to contain two insecticide ingredients - diazinon and piperonyl butoxide. ²⁸⁴
1995	Radioactive phosphorous-32 (P-32)	USA	Radiological	0	1	An MIT researcher was apparently intentionally contaminated with P-32. ²⁸⁵
1995	Radioactive phosphorus-32 (P-32)	USA	Radiological	0	27	At the NIH labs, food and a water cooler were contaminated with P-32, affecting a pregnant scientist (who believed she was the target) and 26 of her co-workers. ²⁸⁶
1995	Ricin	USA	Biological	0	1	Dr. Debora Green was accused of poisoning her husband with ricin, although the Center for Nonproliferation Studies' Chronology of Incidents Involving Ricin notes that it is not clear if Green "extracted the ricin or merely added the beans to the food." ²⁸⁷

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1996	Rat Poison	Jordan	Chemical	1	0	Raya Musa and Hassan Faleh served Musa's husband food laced with rat poison. ²⁸⁸
1996	Insecticide	Spain	Chemical	0	1	A wife poisoned her husband over the course of a year by putting ant poison in his food in Valencia. ²⁸⁹
1996	Radioactive phosphorus-32 (P-32)	Taiwan	Radiological	0	1	"A young male graduate student in the Institute of Plant Pathology in a public university in mid Taiwan was warned by his classmate that he had been repeatedly poisoned with undetermined amounts of P-32 in early 1996. According to the laboratory diary provided by this specific classmate, various amounts of P-32 and laboratory chemicals, including acrylamide, were put into his drinking cup and eating utensil in the laboratory approximately 30 times since October 1994. The Plant Pathology laboratory was reported not to have used any radio isotope in its experiments. These P-32 sources were inappropriately taken from other central molecular biological laboratories in the same university." ²⁹⁰
1996	Shigella	USA	Biological	0	13	Diane Thompson tainted pastries with shigella and gave them to her co-workers. ²⁹¹
1997	Insecticide	Australia	Chemical	0	0	Luan Van Luu was jailed for attempted murder of a companion when he laced her dinner with insecticide. The woman was put off by the strange smell and did not eat the meal. ²⁹²
1997	Insecticide	Australia	Chemical	0	0	Mark James Milton, an ex-police officer, left a tainted tub of yogurt and a jar of coffee at two separate supermarkets in Bondi and Sydney in an extortion attempt. ²⁹³
1997	Cyanide	Germany	Chemical	0	0	Thomy, a subsidiary of Nestle, was the target of an extortion attempt. Three supermarkets in the German towns of Saarbruecken, Bremen and Regensburg were closed after the extortion threat, and a single bottle of mustard spiked with cyanide was found. In a separate incident, the same extortioner "buried boxes of milk-based drinks spiked with acid in a sandbox at a playground in Cologne, potentially endangering the lives of small children", and may have placed more contaminated foodstuffs on store shelves that were not publicly revealed. ²⁹⁴
1997	Rat Poison	Germany	Chemical	0	0	In an extortion attempt three jars of jam were spiked with rat poison in the towns of Neustadt, Hamburg, and Witteneberg, respectively. "The jar had a note attached to the inside of the lid, saying 'Attention Poison.' ²⁹⁵
1997	Unknown Poison	Hong Kong	Chemical	1	0	Suspect's surname "Leung" only given in newspaper reports. He spiked a bottle of apple juice with poison with a "deadly poison." ²⁹⁶
1997	Arsenic	Japan	Chemical	0	3	Masumi Hayashi - implicated the following year in the Wakayama festival poisoning - poisoned an acquaintance who'd come to dinner, serving him <i>gyudon</i> laced with arsenic. The first attempt failed, and she tried again on two subsequent occasions. Hayashi also tried on separate occasions to poison her husband and one of his former employees by spiking their food with arsenic. ²⁹⁷
1997	Rat Poison	Japan	Chemical	0	1	Between December 1997 and February 1998, Hitoshi Oyanagi laced his pregnant girlfriend's meals with rat poison in an effort to kill the unborn child. ²⁹⁸
1997	Weed Killer	UK	Chemical	0	1	Linda Ogston tried to poison her husband by spiking his vodka-and-coke. ²⁹⁹

288 Reuters, "Jordanian lovers to hang for rat poison murder", 20 November 1996

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293 Naomi Toy, "Ex-policeman put poison in yoghurt," The Daily Telegraph (Sydney, Australia), November 22, 1997

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297 Japan Economic Newswire, "Wakayama man admits he possessed arsenic," October 6, 1998; Mainichi Daily News, "Woman Tried to Poison Her Victim Twice More," October 6, 1998; Mainichi Daily News, "New evidence in poisoning case- Arsenic found near Wakayama suspect's home", October 10, 1998; Alan Stokes, "Hairy Curry in Case of Wife and Death," The Australian, May 14, 1999

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299 The Daily Mirror (UK), "Wife's Poison Vodka Revenge", June 27, 1997

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1997	Arsenic	USA	Chemical	0	1	A 13 yr old girl in Florida put rat poison in her mother's food in an attempt to harm her. ³⁰⁰
1997	Arsenic / Mercury	USA	Chemical	0	1	Steve Allen White poisoned a colleague's food between April and November of 1997 in Tennessee. ³⁰¹
1997	Rat Poison	USA	Chemical	0	1	Hyung-Oh Cha, as part of an extortion attempt against a local grocery store in Queens, NY, tampered with a single package of cookies, lacing them with rat poison. A customer saw the warning Cha had placed in the package, but ignored it and subsequently became sick. ³⁰²
1998	Cleaning fluid	Australia	Chemical	0	1	A councilwoman's cup of tea was spiked at a council meeting in Australia. ³⁰³
1998	Rat Poison	China	Chemical	5	0	Diao Ruying killed a neighbour's five children by giving them poison-laced sweets. ³⁰⁴
1998	Cyanide	Columbia	Chemical	2	2	"Easter gift baskets containing cyanide-laced wine have arrived on the doorsteps of at least two dozen Catholic priests, killing one cleric and a lay worker." Traces of cyanide, ammonia and methanol were found in the bottles of wine. ³⁰⁵
1998	Cyanide	Egypt	Chemical	1	1	John Allan killed his wife on holiday by putting cyanide in her gin and tonic. ³⁰⁶
1998	Detergent/Bleach	Hong Kong	Chemical	0	1	Shum Kin-Yung forced his girlfriend "to drink a cocktail spiked with detergent and bleach." ³⁰⁷
1998	Potassium Sodium	Hong Kong	Chemical	5	0	"The 47-year old [Li Yuhui], a resident of Shantou in south China's Guangdong Province, was charged with killing the five people on 21st July 1998 by offering them some so-called magic water, which was in fact mixture of mineral water and potassium sodium that Li produced himself." ³⁰⁸
1998	Temazepan	Ireland	Chemical	0	2	John Hope spiked two elderly ladies' drinks with Tamazepan (Normazon), apparently in order to sexually assault them. Hope got the prescription medicine from his mother. ³⁰⁹
1998	Arsenic	Japan	Chemical	4	63	Masumi Hayashi responsible for curry poisoned at a summer festival in Wakayama. ³¹⁰
1998	Cyanide	Japan	Chemical	0	1	"On Tuesday a 29-year-old supermarket manager Suzaka, Nagano province, managed to avoid death when he went to drink tea which had been spiked with cyanide, reports said Wednesday... Police said someone had injected the poison in relatively concentrated form through a 3-4 millimetre hole in the base of the tea box." ³¹¹
1998	Disinfectant	Japan	Chemical	0	1	A 15 yr old schoolgirl mailed soft drinks filled with disinfectant to 27 of her classmates and teachers. Most thought it smelled suspicious, except for one enterprising 14 yr old that drank some of the bottle and was promptly taken to the hospital with burns to his throat and stomach. ³¹²
1998	Insecticide	Japan	Chemical	0	0	"A man in western Japan escaped injury Wednesday when he spat out liquid from a drinks bottle which had been contaminated with insecticide." ³¹³
1998	Sodium Azide	Japan	Chemical	0	10	"Ten employees at a timber processing plant in Niigata city, north of Tokyo, were hospitalised yesterday after drinking tea and coffee made with hot water that police believe might have been poisoned." ³¹⁴
1998	Unknown Poison	Japan	Chemical	0	1	"A woman working in a convenience store Thursday night in the western city of Nagoya swallowed a mouthful of pineapple juice and immediately vomited." ³¹⁵

300 AP, "13-year-old girl charged with trying to poison mother", April 4, 1997

301 AP, "Bartlett man convicted of trying to poison friend, business partner," January 30, 2000; AP, "Poisoning conviction draws 31-year sentence", February 29, 2000

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311 *Deutsche Presse-Agentur*, "More cases of attempted poisoning hit Japan", September 2, 1998

312 *Deutsche Presse-Agentur*, "Japanese schoolgirl admits poisoning pupils", September 8, 1998

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314 Kwan Weng Kin, "10 in Japan hit by 'poisoned' drinks," *Straits Times*, 11 August 1998; Stephanie Strom, "10 Japanese In Hospital; 2d Poisoning Is Suspected", *The New York Times*, August 11, 1998; Elaine Lies, "Japan Lives in Fear after Second Poisoning," *Birmingham Post*, August 12, 1998

315 Joseph Coleman, "Rash of summer poisonings puts Japan on edge", *AP*, September 4, 1998

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1998	Mercury	UK	Chemical	0	0	William Smith, a maintenance engineer at the science dept of Exeter University, put mercury into the biological sciences dept tea kettle. ³¹⁶
1998	Antifreeze	USA	Chemical	0	1	Karen Hartman, of Iowa, tried to kill her husband by lacing his beer with antifreeze. ³¹⁷
1998	Antifreeze	USA	Chemical	1	0	Mark Jensen slipped antifreeze into his wife's food or drink, killing her. ³¹⁸
1998	Cleaning product	USA	Chemical	0	0	Two teenagers tried unsuccessfully to poison their parents by putting household cleaning agents (unnamed) in their ice tea. The drink smelled funny, the parents called the police. ³¹⁹
1998	Cyanide	USA	Chemical	0	0	A postal worker noticed Kathryn Schoonover "filling the envelopes next to a container on the counter labelled with poison symbols." Schoonover had planned to post over a 100 envelopes with the cyanide labelled as a nutritional supplement. ³²⁰
1998	Iodine	USA	Chemical	0	2	A 12-yr old girl, who shot her mother a year later, attempted to poison her mother and her friend by putting iodine pills in the mother's coffee and in the salt & pepper shakers. ³²¹
1998	Iodine-125	USA	Radiological	0	2	Cheng Gu stole the iodine-125 and laced it in with his ex-girlfriend and roommates meals. While radiological, the level of radiological contamination was "equal to what you would get in a medical diagnostic procedure." ³²²
1999	Oleander	Australia	Biological	0	1	Annmari Hughes tried to poison her husband by putting oleander in his tea. ³²³
1999	Arsenite	Japan	Chemical	0	5	"Traces of arsenite—a deadly poison—were found in a hot water pot at a design studio in Kagoshima after five people were taken to hospital, police said Friday." ³²⁴
1999	Superphosphate Fertiliser	New Zealand	Chemical	0	0	Facility attack. A workman at a water treatment plant found a padlock had been cut, and fertiliser poured into the water intake. Water supplies for this small town were cut off while tests were run. Results showed contamination was minimal, no health risks to people. ³²⁵
1999	Insecticide	South Africa	Chemical	1	4	Two women were arrested for lacing tea with an insecticide on a farm in KwaZulu-Natal. ³²⁶
1999	Insecticide	Thailand	Chemical	0	12	As a prank, a boy named in newspapers as "Chai" laced his friends' instant noodles with a carbamate-based insecticide. No charges were brought. ³²⁷
1999	Copper Sulfate	UK	Chemical	0	0	A 15-yr old student in Greater Manchester placed the copper sulfate in their teacher's coffee. The teacher noticed the taste after a single taste and did not suffer any ill-effects. ³²⁸
1999	Antifreeze	USA	Chemical	0	2	Donald Paul Ayres put antifreeze in his two daughters' drinks. ³²⁹
1999	Bleach/Insecticide	USA	Chemical	0	0	A 15 yr old boy in Louisiana put bleach in his grandmother's orange juice and rat poison in his cousin's hamburger. Another child in the house warned them, and no harm befell them. ³³⁰
1999	Drano	USA	Chemical	0	0	Lorraine B. Gray sent bottles of a fruit drink tainted with Drano to seven colleagues. None of the employees drank the juice. ³³¹
1999	Prescription Drug	USA	Chemical	0	1	The special education student in Arizona, Daniel Arnulfo Ortega, Jr., was charged with attempted first-degree murder after lacing a teacher's aide soft drink with Risperdal, an anti-psychotic. Two other students drank from a second can but were uninjured. ³³²

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329 *AP*, "Father who gave daughters antifreeze acquitted of attempted murder", July 21, 2000

330 *AP*, "Coroner: it's doubtful murder suspect poisoned mother," October 14, 1999.

331 *AP*, "Caseworker allegedly tried to poison colleagues to help clients", September 2, 1999

332 *AP*, "Yuma high schooler accused of trying to poison teacher's aide", October 26, 1999

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1999	Rat Poison	USA	Chemical	0	0	Erica Babson tried to poison her parents by unscrewing the cap to the water faucet and placing some rat poison inside. The parents noticed the water didn't run properly, and so didn't consume the tap water. ³³³
2000	Arsenic	Canada	Chemical	0	27	Arsenic was added to the reservoir tank of a vending machine serving coffee, sickening 27 people. The dosage was not high enough to be fatal. ³³⁴
2000	Rat Poison	China	Chemical	3	2	Wang Pengjiao "put rat poison in her neighbour's food and water on six occasions" killing 3 and injuring 2 in Qingfeng County, Henan Province. ³³⁵
2000	Tetramine	China	Chemical	0	48	"In 2000, a migrant worker in Nanchang County in Jiangxi Province laced the meal of a boarding house with rat poison and made 48 co-workers ill." ³³⁶
2000	Unknown Poison	Ghana	Chemical	2	0	Adjoa Badu poisoned meal of her husband and his other wife. ³³⁷
2000	Chemical Herbicide	Italy	Chemical	0	1	The sacristan of a church, Alfio Rizzo, near Catania, in Sicily, attempted to murder the local priest by replacing the communion wine with a weed killer/herbicide. ³³⁸
2000	Insecticide	Japan	Chemical	0	0	A package of curry, contaminated with insecticide and labelled "poisoned", was found on the shelves of a shop in Hamamatsu. An extortion letter was sent to the manufacturer. ³³⁹
2000	Prescription Drug	Japan	Chemical	0	1	Yukiko Sakanaka allegedly laced her daughter's food and drinks with an asthma medication on six occasions. ³⁴⁰
2000	Mercury	UK	Chemical	0	0	Edward Latham was sentenced to life in prison for attempting to kill a friend by putting mercury from a medical thermometer in their drink (even though such mercury is not toxic). ³⁴¹
2000	"Gopher Poison"	USA	Chemical	0	0	Joseph Novak broke into an acquaintance's house, slipping poison into their dog's food and the gopher poison (and allegedly urine) into a bottle of gin and a drink mix. ³⁴²
2000	Antifreeze	USA	Chemical	1	0	"Prosecutors believe [Angela Rodriguez] put enough poisonous oleander in her husband's meals to send him to the hospital and then killed him at home by lacing Gatorade with antifreeze." ³⁴³
2000	Arsenic	USA	Chemical	0	1	Marshall Howard Murdock poisoned his girlfriend with arsenic. Murdock purchased from a mail-order company "a pound of sodium cyanide, 4 ounces of arsenic powder and 4 ounces of arsenic acid. All three shipments were sent to his home address under the name Cornerstone Technologies." Murdock also poisoned his wife with thallium in January 2001 (see 2001 reference). ³⁴⁴
2000	Arsenic	USA	Chemical	1	0	Ann Miller Kontz put arsenic (either from ant or rat poison) into her husband's meals. ³⁴⁵
2000	Copper Radiator Sealant	USA	Chemical	0	0	"A high school junior [Michelle Kniola] accused of attempting to poison a teacher who dates her aunt has been charged with criminal recklessness. ... According to court records, the 18-year-old is accused of lacing a soft drink of Michigan City High School science teacher David Davis with copper radiator sealant earlier this month in an attempt to make him ill." ³⁴⁶
2000	Household cleaners	USA	Chemical	0	1	The three teenage Burger King employees contaminated hamburgers with cleaning supplies, sickening one person. ³⁴⁷
2000	Household cleaners	USA	Chemical	0	1	Lecey Malcolm, 15 yrs old, put the household cleaner in her two young nieces' drinks. One girl became sick after drinking the concoction. ³⁴⁸
2000	Rat Poison	USA	Chemical	0	1	Femesha Foster put rat poison into her boss' soda. ³⁴⁹

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334 AP, "Coffee from vending machine poisons Quebec City students", June 2, 2000

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336 Japan Economic Newswire, "Rat poison 'Dushuqiang,' though banned, grips China for years," September 16, 2002

337 Magdalene Sey, "Woman Sentenced to Death," *Chanaian Chronicle*, April 15, 2008

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342 AP, "Woman claims Internet friend killed dog, poisoned drink," May 10, 2000

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344 AP, "Tennessee man sentenced for giving Rankin woman arsenic", August 30, 2002

345 Aaron Beard, "Trial date set for Kontz in arsenic death case," February 10, 2005; Aaron Beard, "Wife Pleads Guilty in Poison Conspiracy," AP, November 7, 2005

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348 AP, "Teen charged with trying to poison young nieces", November 28, 2000

349 AP, "Woman Gets 20 Years for Poisoning Boss," January 20, 2005

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2000	Rat Poison	USA	Chemical	0	1	Maryann Flanagan was videotaped putting granules of rat poison in her boss' coffee at a Wal-Mart store in Pembroke Pines, FL. ³⁵⁰
2000	Rat Poison	USA	Chemical	0	0	A package of rat poison was found "in a pot of thawing hot dogs at a grade school's kitchen]... Cooking was stopped before lunch was served, food was brought from off-site and no students were reported ill.... "At no point were any students exposed. The potential was distant and next to nonexistent," Bryant said. "We're not concerned about general widespread delivery of the product." ³⁵¹
2000	Rat poison	USA	Chemical	0	34	"Two seventh graders were being questioned Tuesday after 34 classmates became sick after eating salsa that apparently was sprinkled with rat poison. Fifteen students were taken to area emergency rooms and 19 were examined by medical personnel at the school." ³⁵²
2000	Thallium	USA	Chemical	1	0	Ann Perry slipped insecticide containing thallium into her long-term boyfriend's meals for almost a year. ³⁵³
2000	Thallium / Arsenic	USA	Chemical	0	12	Twelve workers at a Midwestern auto factory were poisoned when thallium and arsenic were put in their coffee pots. All eventually recovered. NOTE: No actual date of incident is given in article; in an email conversation with the author of the article, he indicates they estimated date of exposure to February, 2000. ³⁵⁴
2000	Various	USA	Chemical	0	0	"The girl allegedly went into an empty classroom May 10 and poured bleach, laundry detergent, soda, perfume and sleeping pills into a 51-year-old teacher's coffee. The teacher did not drink the coffee because it smelled funny, police said Monday." ³⁵⁵
2001	Weed Killer	Brunei	Chemical	1	0	Dyg Gandan binti Matising killed her husband by lacing his beer with weed killer. ³⁵⁶
2001	Rat Poison	China	Chemical	2	0	Li Feng killed two classmates at his high school in Jinan by putting rat poison in their porridge. Used banned rat poison Du Shu Qiang. ³⁵⁷
2001	Rat Poison	China	Chemical	2	0	"Twin 16-year-old sisters have been sentenced to life imprisonment for murdering their parents by spiking their rice porridge with rat poison. The crime was committed on July 18 after the parents reprimanded the two girls for poor high school entrance exam scores that kept the girls out of one of the best schools in Anshun city, southern Guizhou province." ³⁵⁸
2001	Rat Poison	China	Chemical	3	16	Du Keping bought rat poison in order to kill his son and wife. Before doing so he wanted to test the effectiveness of the poison and so "spiked bottles of soft drinks at two branches of the Wandelong Supermarket chain in Nanyang city. One customer who bought a soft drink later died and four became seriously ill. About a dozen more were saved after receiving treatment at hospitals." ³⁵⁹
2001	Rat Poison	China	Chemical	4	0	Between December 1998 and January 2001, Li Hujie poisoned in quick succession four husbands by lacing their drinks with rat poison. ³⁶⁰
2001	Rat poison	China	Chemical	0	120	"A contract dispute among Chinese noodle-makers was believed to be behind the illnesses of about 120 people who had eaten noodles laden with rat poison at restaurants in central China, news reports said on Wednesday. The China Daily reported that 93 victims of poisoning remained hospitalized on Wednesday in the towns of Ningxiang and Changsha in Hunan province. Authorities reportedly suspected that two brothers who had leased a noodle factory from two of its owners had got into a contract dispute with them and put rat poison in their products before they fled from the area. The poisonings occurred at 16 restaurants that got noodles from the factory." ³⁶¹

350 AP, "Miami woman admits to putting rat poison in boss' drink", January 27, 2000

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2001	Pesticide	Hong Kong	Chemical	0	0	Using the name "Hong Kong Laden" the two, Ma Chiu-sing and Kwok Kuk-heung, in an extortion plot designed to garner money and oust the CEO of a local company, placed the pesticide carbofuran in a package of mashed potatoes and a bottle of chocolate drink at two supermarkets. ³⁶²
2001	Unknown Poison	Japan	Chemical	0	2	Two co-workers were taken ill after drinking a soft drink laced with an unidentified chemical. It is not clear if the drink was contaminated at the retail store or at the workplace. ³⁶³
2001	Unknown Poison	Nigeria	Chemical	1	0	Rakiya Abdu put poison in her husband's drink, which was drunk by her foster daughter. ³⁶⁴
2001	Strychnine	Northern Ireland	Chemical	0	1	Mad Dog Adair in prison - someone put rat poison containing strychnine in a soft drink. ³⁶⁵
2001	Rat Poison	Philippines	Chemical	0	5	The 16 yr old maid, feeling mistreated by her employers, laced their rice with Racumin-brand rat poison. ³⁶⁶
2001	Methomyl	Singapore	Chemical	1	2	Quek Loo Ming worked at the Institute of Science & Forensic Medicine and stole methomyl (pesticide), in the lab as evidence in a police investigation. Quek spiked a bottle of mineral water at a NYE party. ³⁶⁷
2001	Antifreeze	UK	Chemical	0	1	In an office prank, someone put antifreeze (containing methanol) into a co-worker's orange juice. ³⁶⁸
2001	Prescription Drug	UK	Chemical	0	1	Alexandra Lucy Ashford put five types of prescription drugs into her roommate's pasta. ³⁶⁹
2001	Antifreeze	USA	Chemical	1	0	Lynn Turner was also convicted (see 1995 case) of poisoning her boyfriend by putting antifreeze in his jell-O or drink. ³⁷⁰
2001	Arsenic	USA	Chemical	0	1	Michael Vaught was charged with attempted murder after putting weed killer (containing arsenic) into his wife's drink. ³⁷¹
2001	Faecal Matter	USA	Biological	0	0	Marco Arellano, a homeless man with apparent mental problems, mixed urine and faeces into two spray bottles and over a number of months contaminated around a dozen salad bars in Manhattan. On each occasion, someone noticed the action and called the health authorities. Of interest to media studies students, one of the articles on this incident is penned by disgraced journalist Jayson Blair. ³⁷²
2001	Rat Poison	USA	Chemical	0	0	The two girls, Jessica Leigh Woolsey and Toni Woolsey, of Arkansas, put rat poison in their grandmother's noodles. She thought they smelled funny and didn't eat them. ³⁷³
2001	Rat Poison	USA	Chemical	0	1	Paul Turner attempted to kill his wife by lacing cookies with D-con-brand rat poison. ³⁷⁴
2001	Thallium	USA	Chemical	0	1	Marshall Howard Murdock poisoned his wife with thallium he purchased from a mail-order company. In 2000 he poisoned his girlfriend with arsenic (See 2000 reference). ³⁷⁵
2001	Cyanide	Vietnam	Chemical	13	0	Le Thanh Van poisoned 13 people with cyanide between 1998 and 2001. ³⁷⁶
2002	Unknown Poison	Bangladesh	Chemical	1	1	Poisoned mango juice sent in revenge for turning down marriage proposal. ³⁷⁷
2002	Rat Poison	China	Chemical	0	193	Two caterers, He Zhaohai and Tang Bixin, feuding with school admin, put rat poison (poss. dushuqiang) into breakfast at school in Changde. ³⁷⁸
2002	Rat Poison	China	Chemical	1	15	Zhong Dongxiang put rat poison " into a milk pail while the milkman was making a delivery" in order to throw authorities off of his trail (much like Paul Agutter case in Edinburgh) and also added "more poison into milk at his home which his wife consumed and was later killed." ³⁷⁹

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2002	Tetramine	China	Chemical	2	0	Jiang Xingyou, the owner of a restaurant, poisoned a rival one with dushuqiang, killing two employees. Anqing, Anhui Province. ³⁸⁰
2002	Tetramine	China	Chemical	38	300	In the town of Tangshan, near Nanjing, "[Chen Zhengping] put poison in the rival eatery's water supply and noodles hoping to give breakfast-eaters stomach trouble." Used banned rat poison Du Shu Qiang. Some confusion over numbers - various newspaper reports put the death toll 38, 41, 49, and 100. ³⁸¹
2002	Unknown Poison	China	Chemical	0	72	"Seventy kindergarten children and two teachers have been hospitalized in south-eastern China after falling ill from a school lunch of corn porridge laced with rat poison" by Huang Hu in Wuchuan's Huangpo Township on the Leizhou Peninsula, Guangdong Province. The owner of a rival kindergarten was jealous of the success of the other. ³⁸²
2002	Sodium Cyanide and Sodium Azide	Japan	Chemical	0	3	Kazuhiro Meguro mixed sodium cyanide and sodium azide into the sugar pot at his workplace. Meguro worked at a chemical company and so had access to the materials. ³⁸³
2002	Cyanide	USA	Chemical	0	0	Tashala Hayman bought two pounds of cyanide from a chemical company in Texas and spiked a can of coke which she sent to Senator Edward Kennedy. The woman was arrested on separate charges (police found another can in her home addressed to Prince William) and the can was intercepted in the DC mail system. ³⁸⁴
2002	Insecticide/Nicotine	USA	Chemical	0	111	On Dec. 31, 2002, Randy Jay Bertram (a supermarket employee) laced 250 pounds of ground beef with insecticide. Those sickened included 40 children. The insecticide, "Black Leaf 40" has high levels of nicotine in it. ³⁸⁵
2002	Paint thinner	USA	Chemical	0	1	Travis Jay Shoemaker put airbrush thinner in his father's coffee. ³⁸⁶
2002	Thallium	USA	Chemical	0	7	Adetokundo "Philip" Fayemi attempted to kill his ex-girlfriend using Thallium he'd ordered over the internet and inadvertently ended up poisoning six others. ³⁸⁷
2003	Copper Sulfate	Canada	Chemical	0	3	Unnamed teenage girls were arrested for poisoning the frozen drink of a schoolmate. ³⁸⁸
2003	Tetramine	China	Chemical	0	60	Yan Wancai put dushuqiang in bottles of soya and chilli sauce at a breakfast buffet in Ningbo, Zhejiang Province. ³⁸⁹
2003	Tetramine	China	Chemical	0	161	Xu Guohua mixed dushuqiang with baking powder at the kitchen of Changhu Centre Primary School, in Yueyang, Hunan Province on Sept 23, 2003 poisoning 161 students. ³⁹⁰
2003	Tetramine	China	Chemical	2	25	"In the south-central province of Hunan, a man [Wei Entan] upset because his affair with a married woman was ending tried to poison her children, state media reported... One died, but not before he shared rat poison-laced popcorn and oranges with his young classmates, killing a second child and sickening 25 others." ³⁹¹
2003	Tetramine	China	Chemical	5	15	A farmer, Zhong Yongjin, put dushuqiang in mutton soup at a meal for his estranged in-laws at his home in Minzhu, Sichuan Province. ³⁹²

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2003	Tetramine	China	Chemical	10	23	Chen Xiaomei arrested. "Ten people are dead from apparent rat poison added to their rice and 23 are still in intensive care in Lichuan of Central China's Hubei Province, according to the provincial health bureau. On Monday, 33 people felt ill during a meal at Huapin Village resident Zhu Fabin's home after they attended Zhu's father's early afternoon funeral ceremony." ³⁹³
2003	Tetramine	China	Chemical	16	1	Chen Fuzhou poisoned 16 homeless men using Dushuqiang rat poison mixed with soft drinks between May 25 and June 26, 2003. Reports indicate the town as Longgang, located in Cangnan County, Zhejiang. Chinese newspaper reports paint his actions resulting from his membership in the banned Falung Gong sect, although this may be official propaganda. ³⁹⁴
2003	Rat Poison	Hong Kong	Chemical	0	2	Huang Zhuandi, suspecting her husband was cheating on her, slipped rat poison she'd bought in mainland China (where she lived) into his food. A co-worker ate some leftovers and was severely injured. ³⁹⁵
2003	Industrial Chemicals	Italy	Chemical	0	50	A poison scare hit Italy after several bottles of mineral water (and in a few cases, milk) were allegedly injected with a variety of household chemicals including bleach, acetone, ammonia. It's not clear, much like the Pepsi syringe tampering case, how many of the incidents noted were staged by customers, hospital visits arising from people simply suspecting they'd been poisoned, or actual poisoning incidents. ³⁹⁶
2003	Pesticide	Netherlands	Chemical	0	4	Between 1999 and 2002, Frans van der Laarhoven poisoned yogurts, puddings, and other foodstuffs in an extortion scheme against Dutch companies. Four people did become ill as a result of his contamination. ³⁹⁷
2003	Diazepam	New Zealand	Chemical	0	8	Pourshad Marco Avand injected diazepam into the fruit juice cartons of eight women in New Zealand in order to sexually assault them and steal money. ³⁹⁸
2003	Insecticide	South Africa	Chemical	1	0	John Malula put "Aldicarb" brand insecticide into his daughter's drink, killing her. ³⁹⁹
2003	GBL	Thailand	Chemical	1	7	One man died and seven seriously injured after drinking a bottle of Thai wine in Pattaya. Labels on the wine were forged. It was initially thought (and still reported in some quarters) that the incident was an attempt to damage the reputation of the winemakers by a rival. Lab tests found gamma-butyrolactone (GBL), tetrahydrofuran, and acetonitrile in the bottles. In fact the bottles of wine were being used by a gang to smuggle GBL (a precursor to GHB, and sometimes marketed under the term "liquid ecstasy") to the United States. The Thai they employed to ship the wine to the USA (it seems she did not realize what was in the bottles) did not deliver them, instead giving some bottles to her ex-husband, who promptly shared them with friends. The incident did, however, damage the reputation and sales of the Thai wine company. ⁴⁰⁰
2003	Antifreeze	USA	Chemical	0	1	Maureen Plambeck spiked her sister-in-law's margarita. ⁴⁰¹
2003	Arsenic	USA	Chemical	1	15	Coffee at a church was intentionally laced with arsenic. The suspect, Daniel Bondeson, killed himself before he could be questioned. ⁴⁰²
2003	Potassium Cyanide	USA	Chemical	1	0	Ryan T. Furlough, a high school student, purchased potassium cyanide over the internet using his mother's credit card and spiked a fellow student's soda. The student died 5 days later. ⁴⁰³

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2003	Rat Poison	USA	Chemical	0	3	Janet Askins, babysitting her neighbour's three children, put rat poison in the macaroni and cheese. ⁴⁰⁴
2003	Rat Poison	USA	Chemical	0	2	Matthew Allen Ritter put rat poison into his children's drinks. ⁴⁰⁵
2004	Unnamed Chemical	Canada	Chemical	0	0	Adel Arnaout injected a number of water bottles with a chemical police refused to identify, sending them to two talent agencies in Toronto. One of the staff at an agency noticed the pricks on the bottle from where Arnaout injected the chemicals and called the police. ⁴⁰⁶
2004	Tetramine	China	Chemical	0	59	Zhang Taisheng, who ran a food stall at a primary school in Xiping Village, Lushi County, Henan, mixed dushuqiang with starch and "mixed it with sugar, peanut and some rice glue dumplings in a cloth bag and hung the bag on the door of" a rival stall owner. ⁴⁰⁷
2004	Arsenic	Indonesia	Chemical	1	0	Munir, a human rights activist, was killed on a Garuda flight to Amsterdam when his juice was spiked with arsenic. ⁴⁰⁸
2004	Cyanide	Indonesia	Chemical	3	0	Budiono Mujiono (aka Maman) laced coffee with cyanide. ⁴⁰⁹
2004	Unknown	Russia	Unknown	0	1	Reporter Anna Politkovskaya's tea was poisoned on way to Ossetia. ⁴¹⁰
2004	Rat Poison	South Africa	Chemical	0	1	A woman in Polokwane, South Africa, attempted to poison her boyfriend by putting rat poison in his porridge. The report notes it is called "ga le phirime" and there is reference to this being a local poison used in the past. ⁴¹¹
2004	Insecticide	Thailand	Chemical	0	37	A teacher [Thanyaya Hommak] at a kindergarten in Samut Prakan mixed insecticide into chocolate drinks, causing 37 children to be ill. ⁴¹²
2004	Tetrachlorodibenzoparadoxin (TCDD)	Ukraine	Chemical	0	1	Yushchenko poisoning with dioxin in his food (possibly soup). ⁴¹³
2004	Acetone	USA	Chemical	0	1	A teenager put acetone in her classmates drink. ⁴¹⁴
2004	Antifreeze	USA	Chemical	1	0	Maryann Neabor murdered her brother-in-law by putting antifreeze in his drink. ⁴¹⁵
2004	Antifreeze & Lye	USA	Chemical	0	0	The Kansas couple, Donna Ozuna-Trout & Ralph Trout, sent their neighbour "coffee cake, glazed doughnuts and root beer laced with poison." ⁴¹⁵
2004	Arsenic	USA	Chemical	1	0	Tamara Rollo spiked her boyfriend's health drink with arsenic. ⁴¹⁷
2004	Ethylene Glycol	USA	Chemical	1	0	James Keown poisoned wife to death with anti-freeze in Gatorade and food. ⁴¹⁸
2004	Prescription Drug	USA	Chemical	0	0	Brandon Weaver stole blood thinner medication and crushed it into his wife's sandwich. "The woman didn't eat enough to cause serious problems." ⁴¹⁹
2004	Prescription Drugs	USA	Chemical	0	2	Mary E. Cannon used a blender to "grind up the drugs and put them in the McDonald's milkshakes" which she gave to her husband and son. ⁴²⁰
2004	Rat Poison	USA	Chemical	0	1	Traci Jackson rat poison in her husband's coffee. ⁴²¹
2004	Rat Poison & Prescription Drugs	USA	Chemical	0	1	Carrie Wheeler on one occasion mixed rat poison into her husband's tacos and on another crushed prescription drugs into his drink. ⁴²²

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406 Adam Huras, "Charges Laid In Poison Scheme; Tampered water bottles sent to modelling agencies", *National Post (Canada)*, November 7, 2007

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419 AP, "Bountiful firefighter arrested in alleged poisoning", March 9, 2004

420 AP, "Police: Woman doesn't remember trying to poison husband and son with lethal milkshakes", January 11, 2005

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422 AP, "Woman accused of serving tainted tacos to husband," September 3, 2004

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2004	Ricin	USA	Chemical	0	0	*On June 16, a man told Irvine police that as he was about to feed his son, he found a note inside a jar of baby food warning that it had been contaminated. A similar case was reported by an Irvine couple on May 31 involving the same baby food, Gerber Banana Yogurt, police said. A note was also found inside that jar. ⁴²³
2004	Unknown Poison	Vietnam	Chemical	0	5	Vang Thi Dinh & Giang Dung Xu poisoned their neighbours by mixing poison with sticky rice. Xu bought poison in China (most likely a rodenticide). ⁴²⁴
2005	Potassium Cyanide	India	Chemical	2	0	Usha Pillai added potassium cyanide she purchased in a market into her husband's bottle of liquor, killing him and his nephew. ⁴²⁵
2005	Thallium	Japan	Chemical	0	1	16 yr old Japanese girl from Shizuoka, a fan of serial killer Graham Young, slowly poisoned her mother over a period of a few months. ⁴²⁶
2005	Insecticide	Kuwait	Chemical	5	3	Moaayed al-Saedi poisoned his eight children by putting insecticide in their beverages, killing 5. ⁴²⁷
2005	Insecticide	Malaysia	Chemical	0	1	A 26 yr old maid in Malaysia spiked the house owner's drink with insecticide. ⁴²⁸
2005	Insecticide	Malaysia	Chemical	0	1	A 31 yr old maid in Malaysia spiked into her employer's son's lemonade. ⁴²⁹
2005	Insecticide	Philippines	Chemical	28	130	Ana Luyong sold cassava fritters laced with a coumaphos insecticide to a group of schoolchildren in SE Philippines. ⁴³⁰
2005	Mercurous Nitrate	Philippines	Chemical	0	1	A teenager became seriously ill after two classmates, at the Philippine Science High School, where they had easy access to the chemical, put the mercurous nitrate in her water bottle. ⁴³¹
2005	Cyanide	Taiwan	Chemical	1	3	Wang Ching-chan poisoned bottles of an energy drink with cyanide, attaching a note saying "I am Poisonous" (which many customers, evidently, ignored) in an extortion attempt. The company was forced to recall over a million bottles and suspended production. ⁴³²
2005	Antifreeze	UK	Chemical	0	1	Kate Knight attempted to murder her husband on their wedding anniversary by lacing his Indian curry and red wine with antifreeze. Her husband was left in a coma for four months, suffered kidney failure, brain damage, deafness, and the loss of most of his sight. ⁴³³
2005	Glass/Needles	UK	Physical Contaminate Agent	0	0	Glass and needles were found in at least five loaves of Kingsmill brand bread loaves. ⁴³⁴
2005	Copper Sulfate	USA	Chemical	0	1	Danielle Sanders stole the copper sulfate from her high school and laced her mother's boyfriend's drink. ⁴³⁵
2005	Rat Poison	USA	Chemical	0	1	Cheryl M. Raybuck laced her husband's food over a period of days in an attempt to kill him. ⁴³⁶
2005	Rat Poison	USA	Chemical	0	0	Stephanie Quesnoy & Holley Sweeney put rat poison into two classmates' milk cartons. ⁴³⁷

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APPENDIX 1: INTENTIONAL CONTAMINATION OF THE FOOD SUPPLY CHAIN, 1950 - 2008

2005	Rat Poison	USA	Chemical	0	1	Adaline Colon, of East Hartford, CN, put D-Con brand rat poison in her husband's food after an argument. ⁴³⁸
2005	Rat poison	USA	Chemical	0	3	Jamie Auck, 15 yrs old, laced his family's food on numerous occasions with d-Con brand rat poison. ⁴³⁹
2005	Rat Poison / Medication	USA	Chemical	3	0	Jim Junior Nice poisoned his children's pudding and hot chocolate. ⁴⁴⁰
2005	Rat Poison	USA	Chemical	0	0	Barbara J. March mailed poisoned muffins and candy containing rat poison to several judges and FBI officials, along with threatening letters. The article notes she may have sent poisoned wine to relatives in 1985, although no mention of this could be found in online databases. ⁴⁴¹
2006	Prescription Drugs	Australia	Chemical	0	2	A Brisbane woman was arrested for attempting to poison her two sons by putting crushed prescription tablets into their yogurt. ⁴⁴²
2006	Rat Poison	Australia	Chemical	0	0	"Sizzler closed the salad bars at its 28 restaurants across the country yesterday after it was revealed rat poison had been found in food at two of the chain's outlets in Brisbane. Police said green pellets were found in pasta sauce at the Sizzler restaurant in Toowong in Brisbane's west on January 20. Similar pellets were found in a vegetable soup at Sizzler's Myer Centre outlet in the city about 5pm on Saturday." Jacqueline Forbes was arrested by police in connection. ⁴⁴³
2006	Insecticide	France	Chemical	2	0	Ghislain Beaumont mixed insecticide into his parent's chocolate mousse. ⁴⁴⁴
2006	Unknown Poison	India	Chemical	3	0	Shankar Biswas mixed poison in his wife and son's meal in a murder-suicide. ⁴⁴⁵
2006	Herbicide	Korea	Chemical	0	1	A woman, identified in newspaper reports only by her surname 'Park', contaminated three bottles of Coca-Cola with an herbicide, putting two in a store in Hwasun and one in a restaurant in Tamyang in an extortion attempt. The 41 yr old woman sent extortion messages via text messages to Coca-Cola employees and posted threatening messages on the company website. Coca-Cola recalled 1.1 million plastic bottles from Gwangju, Hwasoon and Damyang. ⁴⁴⁶
2006	Strychnine	Northern Ireland	Chemical	1	0	A prisoner died from strychnine poisoning from a contaminated drink. ⁴⁴⁷
2006	Antifreeze	UK	Chemical	0	1	Keith Lamb, as a joke, spiked a colleague's drink with antifreeze. ⁴⁴⁸
2006	Polonium-210	UK	Radiological	1	4	Alexander Litvinenko case. Litvinenko was murdered after radioactive polonium-210 was allegedly put into his tea or sushi. ⁴⁴⁹
2006	Ant poison	USA	Chemical	0	1	Patricia Berzon put ant poison in her boyfriend's milk. ⁴⁵⁰
2006	Dishwashing Soap	USA	Chemical	0	40	Wendell Woodroffe, an employee at CVS, tainted bottles of grape juice that were then bought by a local church, sickening 40 people who drank it in February 2006. He's also suspected in tampering with a bottle of prune juice in January which a customer bought. ⁴⁵¹
2006	Household cleaners	USA	Chemical	0	3	"A 16-year-old girl has been charged with trying to kill her family by feeding them a dessert she made with floor cleaner." ⁴⁵²

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APPENDIX 1: INTENTIONAL CONTAMINATION OF THE FOOD SUPPLY CHAIN, 1950 - 2008

2006	Prescription Drug	USA	Chemical	0	1	Melissa Jones put "potentially fatal non-prescription drug in her husband's drink." ⁴⁵³
2006	Rat Poison	USA	Chemical	0	0	Dana Simons attempted to poison her sister and sister's boyfriend by putting rat poison in their sandwiches on two separate occasions. They noticed the rat poison both times in the sandwiches and, frustrated by the repeated attempted murders, called the police. ⁴⁵⁴
2006	Rat Poison	USA	Chemical	0	0	An inmate working in the kitchen at St. Clair County Jail "put rat poison pellets on the grits normally served for breakfast." ⁴⁵⁵
2006	Various	USA	Chemical	0	1	Henry Hanson repeatedly attempted to poison his landlord by lacing his milk with "with controlled drugs, poison and harmful substances." ⁴⁵⁶
2007	Rat Poison	China	Chemical	1	11	A woman, only identified by her surname "Hu", put rat poison into the food at a "government department canteen in central China." "The incident occurred on the morning of October 11, when 12 staff members from the No. 2 Branch of the Tax Bureau of Xiantao City in Hubei Province fell sick after eating noodles and soybean milk at the dining hall. A 30-year-old man later died." ⁴⁵⁷
2007	Thallium	China	Chemical	0	3	The student, only identified by his surname "Chang", put thallium into water, and added it to the dinner's of three classmates at China University of Mining and Technology, Xuzhou. ⁴⁵⁸
2007	Thallium	Russia	Chemical	0	2	Yana and Marina Kovalevsky were poisoned when visiting Russia. ⁴⁵⁹
2007	Rat Poison	UK	Chemical	0	1	Heather Mook attempted to poison her husband by putting rat poison in his spaghetti. ⁴⁶⁰
2007	Cyanide and Antifreeze	USA	Chemical	0	1	Karen Tubertini first tried to kill her husband by giving him antifreeze and cyanide, which only made him "violently sick... On three separate occasions, she mixed a lethal dose [of cyanide] into his food." ⁴⁶¹
2007	Paperclip	USA	Physical Contaminant	0	0	A middle school had four incidents of tampering in its canteen over a few weeks. A 12 yr old student was arrested for putting a pin in an container of apple sauce, but it is not clear if he was responsible for earlier incidents or engaging in copycat behaviour. ⁴⁶²
2007	Rodent Poison	USA	Chemical	0	0	Karen L. Wyndham, an employee at Kmart, put rat poison into three packages of ground beef. Nobody bought the beef, and nobody was harmed. ⁴⁶³
2007	Various	USA	Chemical	0	1	"[Jennifer] Ratti allegedly put antifreeze and Valium in her husband's drinks and spiked his food with ant and roach killer." ⁴⁶⁴
2008	Strychnine	Austria	Chemical	0	1	The man, identified only as "Helmut O.", laced a chocolate praline with strychnine to kill the mayor of his local village, who ended up in a coma. ⁴⁶⁵
2008	Rat poison	China	Chemical	3	9	Three people died and nine were put into hospital after the rice cooker at a restaurant in Haikou, in Hainan, was laced with a rat poison. Two men who worked for a rival business, Huang Yuchen and Wu Shushun, were arrested. ⁴⁶⁶
2008	Narcotic	Denmark	Chemical	0	4	Four guards at Nyborg Prison in Denmark were poisoned when prisoners baked a cake for the guards, putting an unnamed narcotic substance inside. ⁴⁶⁷

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454 AP, "Poisoned sandwiches leads to Ocean County woman's arrest", November 19, 2006

455 AP, "Officials investigate rat poison incident at county jail," March 11, 2006

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457 Xinhua General News Service, "Government employee commits suicide after killing colleague with rat poison", October 22, 2007

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461 Sam Wood, "Poison to 'punish' her husband; Wife admits mixing antifreeze and cyanide in his meals," *The Philadelphia Inquirer*, August 21, 2007

462 Matthew Barakat, "Straight pins found in food at Va. middle school cafeteria," AP, May 7, 2007, AP, "12-year-old charged with putting pin in food at school cafeteria," May 9, 2007; Maria Glod, "Boy Charged With Food Tampering," *The Washington Post*, May 10, 2007

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2008	Thallium	Iraq	Chemical	2	9	Cakes laced with thallium were served at a Baghdad sports club, killing two children and injuring nine. Initial reports stated a disgruntled employee brought in the cakes, although later reporting suggests he was reinstated into his position after the incident. Another report indicates authorities had traced the source of the cakes to a bakery in a Sunni Arab district of Baghdad where support for the previous regime was still strong. ⁴⁶⁸
2008	Herbicide	Japan	Chemical	0	1	A customer bought a bottle of green tea spiked with an herbicide. ⁴⁶⁹
2008	Herbicide	Japan	Chemical	0	2	A bottle of tea bought at a supermarket in Kato was found to contain a weed killer containing glyphosate. ⁴⁷⁰
2008	Insecticide	Japan	Chemical	0	0	"A can of coffee bought from a vending machine in Chiyoda Ward, Tokyo, has been found to be tainted with an insecticide ingredient... The insecticide was propoxur, one of the ingredients used in an insecticide to control cockroaches, flies and other insects, the ministry said." ⁴⁷¹
2008	Nail	Japan	Physical Contaminant	0	0	A nail was found in a package of ham sold at a supermarket. ⁴⁷²
2008	Sewing Needles	Japan	Physical Contaminant	0	0	Various incidents of sewing needles being put into foodstuffs at supermarkets have occurred between January and August have been recorded in various supermarkets with various foodstuffs intentionally tampered with, including ones found in watermelon, bananas, cabbages, etc. A 67 yr old woman, Kazuko Yamamoto, was arrested in June in Osaka for putting needles inside fish sold at a rival supermarket; the article notes the same supermarket had recorded 20 such incidents in the same supermarket since April, 2006, but it is not clear if she is responsible for the other incidents in Japan. Incidents have occurred after her arrest, although it is entirely possible they are copycat incidents. ⁴⁷³
2008	Thallium	Russia	Chemical	6	4	Echoing the Graham Young case, Vyacheslav Solovyov was a serial poisoner who over a number of years murdered "his two wives, his 14-year-old daughter, the mother of his third wife, a one-year-old boy and a police investigator... [Police] established that while working in Yaroslavl, Solovyov amused himself by adding different substances to his co-workers' drinks and food, which caused vomiting and diarrhea, and Solovyov enjoyed watching his colleagues run to the toilet." ⁴⁷⁴
2008	Rat Poison	USA	Chemical	0	3	Johanna Vera, in a murder-suicide bid, fed her two children drinks laced with rat poison. ⁴⁷⁵

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472 *HDR Japan*, "Nail Found Stuck in Ham at Discount Store," May 13, 2008

473 *HDR Japan*, "Sewing Needle Found in Salad Sold at Supermarket," April 10, 2008; *HDR Japan*, "Needles Found in Food Sold at Shizuoka Supermarket," April 17, 2008; *HDR Japan*, "Needle Found in Cabbage Sold at Supermarket," May 13, 2008; "Fish shop owner arrested for putting sewing needles in fish at rival supermarket in Osaka", *Japan Today*, June 30, 2008; *Fuji News Network*, "A Sewing Needle..." August 2, 2008; *Mainichi Daily News*, "Sewing needle found inside a watermelon in Saitama," August 2, 2008

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APPENDIX 2: INCIDENTS OF INTENTIONAL CONTAMINATION (UNCONFIRMED)

1953	Unknown	West Germany	Unknown	1	0	Wolfgang Zalus, a former bodyguard of Trotsky was killed in Munich. "Zalus was neutralized by a KGB agent, an ethnic German, who on February 13, 1953, slipped him a slow-acting poison which kills a man in 10-12 days." ⁴⁷⁶
1960?	Unknown	Indonesia	Chemical	1000+	Unknown	"corrupt officials took some of the flour, and covered this up by adulterating the remainder with chemicals. Over 1000 people died as a result." No citation is given for this information. Email conversations with the author put the date "around 1960." ⁴⁷⁷
1969	Unknown	Argentina	Unknown	6	21	The rice at a family meal in Argentina was contaminated with rat poison. No mention is made of intentional contamination. ⁴⁷⁸
1969	Unknown	USA	Chemical	1	0	"Fed and NJ state agents weigh possibility that Louis Saperstein was lured by loan sharks to a final meal laced with poison; Saperstein, on day of final meal, had written to FBI that he was heavily in debt to loan sharks, that he had been physically beaten and feared for his life; his letter had sparked exhumation" ⁴⁷⁹
1972	Arsenic	USA	Chemical	1	0	CS Lardiere, wife of Genovese mafia figure, died after drinking a soft drink spiked with 50 to 70 grams of arsenic. It is not clear if an investigation discovered if the incident was suicide or murder. Her husband attempted to sue Coca-Cola in 1974. Police believed she was murdered to stop her husband from testifying. ⁴⁸⁰
1977	Unknown	Angola	Unknown	0	500	ANC rebels had their food poisoned in Catengue Camp, Angola, allegedly by South African security services. ⁴⁸¹
1977	Thallium	Iraq	Chemical	0	1	Mohsen Shubbar, a religious scholar, was fed thallium in his OJ, but survived. The incident is mentioned in John Emsley's book "Elements of Murder", which has no citations. ⁴⁸²
1977	Unknown	Iraq	Unknown	1	0	Mossad apparently killed Wadia Haddad, leader of Palestinian Popular Revolutionary Front, by co-opting a member of his inner circle and giving him Belgian chocolates contaminated with an unknown poison while he was in Baghdad. Earlier articles report he died of leukemia in East Berlin. ⁴⁸³
1978	Poison	Australia	Chemical	0	9	Assyrian congress Australia, mustard gas-poisoned sweets. ⁴⁸⁴
1978	Thallium	Rhodesia/Mozambique	Chemical	17	0	Unconfirmed killing of ZANLA guerillas by Selous Scouts. ⁴⁸⁵
1978	Unknown	Uruguay	Chemical	1	0	Cecilia Fontana, wife of a Uruguayan politician, died when she drank from a bottle of wine that had been sent to the couple and was apparently spiked with a poison. ⁴⁸⁶
1979	Anthrax	Rhodesia	Biological	182	10,000	South African special forces were allegedly responsible for poisoning the foodstuffs of villagers living in Cochemane, Tete province. ⁴⁸⁷
1980s	Unknown	Africa	Unknown	1	0	The ANC alleges a number of their cadres and supporters were assassinated in the 1980s in Africa by having their drinks or food spiked with poisons (other reports also allege poisons being administered to peoples clothes. No reference is given to actual poison used, dates, or places. Names include Mandla Msibi (Swaziland, 1982); Samuel Phinda (Mozambique, no date given); Themba Ngesi (Mozambique, 1986). ⁴⁸⁸
1980s	Anthrax	Zambia	Biological	1	2	Dr. Schalk van Reesburg, director and researcher at Rodeplaas Research Laboratories in South Africa, alleged his company supplied anthrax for attempted assassination of three Russian advisors to the ANC in Lusaka, Zambia. No date is given for the incident. ⁴⁸⁹
1980	Unknown	Cambodia	Chemical	25	0	"On February 12, the Vietnamese spread poison to water sources in Samle district, Battambang province, and Angkor Borei, Takeo province, poisoning a number of people and killing 18 of them. On February 12 and 13, the Vietnamese put chemical poison to water sources in Sandan district, Kratie province. A lot of people were poisoned and seven died." ⁴⁹⁰
1980	Unknown	Cambodia	Chemical	125	0	"From 10th to 20th May, the Vietnamese enemy mixed toxic chemicals with the powdered milk given to Kampuchea as humanitarian aid and spread poisons in ponds and streams that provide water along the way from the Kampuchean-Thai border to Bavel District, Battambang Province. As a result, 125 people were killed including 22 old people, 31 women, 45 men and 27 children. Subsequently hundreds of other victims died. The post-mortem by our medical staff reveals complete rotting of the intestines...The Vietnamese enemy aggressors and race exterminators are continuing to contaminate various sources of water in the border areas, especially in Bavel District...spreading in sources of water for consumption and on the ground and mixing various types of poisonous products in rice, powdered milk, medicines and water jars." ⁴⁹¹

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APPENDIX 2: INCIDENTS OF INTENTIONAL CONTAMINATION (UNCONFIRMED)

1980	Thallium	Iraq	Chemical	1	0	Salwa al-Bahrani, arrested for smuggling weapons to Islamic fighters and during her interrogation was allegedly fed yogurt laced with thallium. ⁴⁹²
1980	Thallium	Iraq	Chemical	2	1	Amnesty International release report claiming Iraqi government is poisoning dissidents with thallium, stating that three Iraqis who had fled to UK had been poisoned. Two died, with the only one named being Majidi Jihad. ⁴⁹³
1981	Thallium	South Africa	Chemical	0	1	Siphiwo Mtimkulu, after being released from police custody, was diagnosed with thallium poisoning by doctors. ⁴⁹⁴
1984	Unknown	Cambodia	Chemical	5	0	"On 12th December the Vietnamese put poison in the food of two Khmer state officials forced to serve in (Samlanh?) and (Khpoh?) villages, Sangkum Thmei district, killing both. In Chikreng district, the Vietnamese poisoned water on 22nd December, killing two villagers. ("VONADK" 2300 gmt 4 Jan 84) On 25th December in Siem Reap district, Siem Reap Province, the Vietnamese put poison in streams causing the death of a villager. Many others were seriously affected. Despite being exposed and condemned by the world, the Vietnamese have continued to use toxic chemical weapons cruelly and barbarously to exterminate innocent Kampuchean people" ⁴⁹⁵
1984	Unknown	Cambodia	Chemical	30	0	"In September the Vietnamese enemy poisoned fruits and vegetables sold at Kompong Thmar market, Baray District, Kompong Thom province. Thirty persons who bought and ate these fruits and vegetables died. A number of other persons were also affected. The Vietnamese enemy aggressors are now ordering their agents to poison cakes, fruits and vegetables sold in the markets to kill our people in accordance with their genocidal policy. Our brothers and sisters have heightened their vigilance and have followed the activities of the Vietnamese agents who poison foods. They even killed these agents to defend their own lives, their families, their nation and race." ⁴⁹⁶
1984	Unknown	Poland	Unknown	0	1	A Polish General, Zenon Platek, was injured in an attempted poisoning. ⁴⁹⁷
1985	Unknown	Cambodia	Chemical	0	0	"On 27th January, the Vietnamese enemy aggressors stealthily spread poison in various ponds in O Reang commune, Kev Seima district, Mondoliri province, killing many fish. Many inhabitants were incapacitated after eating food cooked with those fish." ⁴⁹⁸
1985	Unknown	Cambodia	Chemical	2	7	"On 8th January in Sambo district of Kratie Province, the Vietnamese enemy aggressors spread poison in water sources, fruit and cakes, killing two inhabitants and seriously incapacitating seven others" ⁴⁹⁹
1985	Thallium	Iraq	Chemical	1	0	General Ammash was allegedly poisoned with thallium in Baghdad, before dying in Helsinki. ⁵⁰⁰
1985	Paraquat	Japan	Chemical	10	35	Soft drinks tainted with paraquat were left in vending machines over a period of a few months in Japan. The bottles were left in the dispenser slots, and many consumers assumed they'd gotten 'lucky' with a free bottle. It's not clear how many of deaths from paraquat-tainted drinks came from these incidents, and how many were suicides that were included in the overall number. ⁵⁰¹
1985	Insecticide	Philippines	Chemical	68	0	Unconfirmed if murder or mass suicide. On Sept. 9, 1985, a local religious leader [Mangayanon Butoag] in the village of Gumitan, 46 miles northwest of Davao, gave over 70 of his fellow villagers/religious followers insecticide-laced porridge. Reports indicate most of the villagers were unaware the porridge was poisoned. Five people did and spat out the porridge, pretending to be dead. Datu Mangayanon Butoag later stabbed himself to death. ⁵⁰²
1985	Plutonium	USA	Radiological	0	0	An anonymous threat was made to contaminate New York City reservoirs with plutonium. The level of plutonium in the water did not pose a health risk, and it is unclear if it was actually intentionally contaminated, or if the samples were contaminated prior to testing. ⁵⁰³
1986	Unknown	Cambodia	Chemical	50	137	"poisoning of civilians by vietnamese troops occupying kampuchea has claimed 50 lives and seriously injured another 137 people...the radio said vietnamese troops put poison in food, vegetables and fruit at some markets in kampfot county and kampfot city of kampfot province on july 14 and 17." ⁵⁰⁴
1986	Ethylene Glycol	Canada	Chemical	1	0	A bottle of Mountain Dew was laced with anti-freeze. George LeBlanc, died three weeks later. The local bottler in Nova Scotia and New Brunswick, Maritime Beverages Ltd, was forced to recall 300,000 bottles. It was determined the contamination took place outside the production facilities; not certain if this was a case of murder or suicide, or accident. ⁵⁰⁵

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495 See: *BBC Summary of World Broadcasts*, "DK reports of use of poison by Vietnamese in Kampuchea", January 6, 1984,

496 *BBC Summary of World Broadcasts*, "VONADK reports fruit and vegetables poisoned by SRV agents", 8 November, 1984

497 *PAP Newswire*, "Somebody Tried to Poison General Platek, Witnesses Say," June 30, 1992

498 *BBC Summary of World Broadcasts*, "Vietnamese poison ponds in Mondoliri", February 11, 1985.

499 *BBC Summary of World Broadcasts*, "DK says Vietnamese poison food and ponds in Kratie" 8 February 1985

500 *AP*, "Ammash was a foe's daughter before becoming Saddam's velvet glove", May 5, 2003

501 Clyde Haberman, "Japanese Puzzle: The Vending Machine Murders," *The New York Times*, December 10, 1985

502 See: *UPI*, "Reports say tribesmen committed suicide to see God", September 20, 1985 and *AP*, "Confirm Deaths of 68 in Mass Poisoning", September 20, 1985.

503 *AP*, "Plutonium detected in NYC water", 27 July 1985; Donald C. Bogen et al., "Threat to the New York City Water Supply - Plutonium," *The Science of the Total Environment*, Vol. 70 (March, 1988), pp. 101-118; Joyce Purnick, "Back When A Water Scare Was a Crisis," *The New York Times*, September 28, 2000;

504 *The Xinhua General Overseas News Service*, July 26, 1986

505 *The Globe and Mail (Canada)*, "Poison source remains a mystery", January 28, 1986; *The Globe and Mail (Canada)*, "Foul play rejected in poisoned pop," February 4, 1986

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1986	Cyanide	Italy	Chemical	1	0	Michele Sindona, a financier with links to the mafia, died when he drank a cup of coffee laced with cyanide in his prison cell. Reports unclear if it was conclusively proved if it was murder or suicide. ⁵⁰⁶
1986	Unknown	Mozambique	Chemical	1	0	An agent recruited by S.A. intelligence alleges he "delivered a consignment of poisoned beer, vodka and brandy to a member of the ANC. At a party the same night he saw a friend, Gibson Ncube another ANC member drinking from one of the laced beer cans... He had been told the poison took about two weeks to kill and left no traces. Shortly afterwards Mr Ncube did die, of a form of creeping paralysis." ⁵⁰⁷
1986	Unknown	South Africa	Chemical	1	0	Victor de Fonseca was apparently a S. African special forces soldier who's tea and orange juice were poisoned in order to kill him. ⁵⁰⁸
1986	Unknown	South Africa	Chemical	0	40	Luke Lukwezi was recruited by SA to infiltrate ANC camp and mix poison in porridge. ⁵⁰⁹
1987	Unknown	Cambodia	Chemical	43	0	"On 17th June, the Vietnamese enemy aggressors injected poison into mangoes, pork and sweets on sale in markets, causing 13 customers in Kop commune, Sisophon district, to die and several others to be seriously incapacitated. On 15th June, they put poison in drinking wells and in sweets, meat and fish in Stoung district, Kompong Thom Province, causing deaths and injuries to many people. . . On 18th June, the Vietnamese sprayed toxic substances in Oknha Heng, Prey Nop and Sre Cham communes of Prey Nop district, Kampot Province, killing 30 of our people, and more are dying there every day." ⁵¹⁰
1987	Unknown	Cambodia	Chemical	118	54	"On 12th July, the Vietnamese enemy put poison in wells, food and sweets on sale in Ang Ta Som, Tram Kak, and Trapeang Andaeuk markets [Takeo Province]; 25 Cambodians died after eating food and sweets bought from these markets, 54 others were seriously affected. . . On 14th July, the Vietnamese enemy mixed poison in medicines and sweets on sale in markets in Phong commune; 15 inhabitants died. . . On 11th July, the Vietnamese enemy put poison in our people's water jars in Phong commune, Kong Pisei district, Kompong Speu province; 16 inhabitants died after drinking this poisoned water, and many others were seriously affected (VONADK in Cambodian 2315 gmt 24 Jul 87). The Vietnamese aggressors assigned their secret agents to poison fish paste and dried fish on sale in Sisophon market on 8th July; 12 people died immediately. . . (VODK in Cambodian 2330 gmt 23 Jul 87) (Excerpts) On 17th July, the Vietnamese dispatched 160 Vietnamese agents, both male and female, to Kampot district; 60 to Tuk Meas district and 30 to Kompong Trach district in Kampot Province to spread poison. Our people in Boeng Trabek and Kompong Trach villages in Kbal Romeas commune, Kampot district, arrested three of these agents and hacked to death another. . . On 15th July, two Vietnamese women spread poison in foodstuffs and wells used daily by our people in Thnal Bat market, Sangkasei market, and Slap Leng market; 50 people were killed. . . The two Vietnamese women were captured by our people and beaten to death." ⁵¹¹
1987	Unknown	Cambodia	Chemical	537	0	"In this ninth rainy season, due to their increasing difficulties on the battlefield of aggression in Cambodia, the Vietnamese enemy aggressors have intensified their massacre of innocent Cambodian people in areas temporarily under their control. The Vietnamese have dispatched their agents to put poison in water sources, vegetables, food crops, foodstuffs, fish paste, fermented fish, dried fish, smoked fish, rice, medicine, sugar, clothing and so on, sold in markets or in other places. The statements by the CGDK's Ministry of Health have successively drawn the attention of international opinion to the great crime systematically planned by the Hanoi Vietnamese aggressors to massacre the Cambodian race and people through toxic chemical weapons. In July and early August, 537 of our people in the provinces of Kampot, Takeo, Kompong Speu, Kompong Thom, Siem Reap and Battambang have died, while many hundreds have been seriously affected. More continue to be affected. These poisons are very noxious, causing instant death to our people." ⁵¹²
1987	Unknown	Cambodia	Chemical	186	0	"Recently, the Vietnamese enemy aggressors arch criminals ordered Vietnamese soldiers who had been disabled during the war of aggression in Cambodia to spread toxic chemicals to kill our innocent Cambodian people. According to their plan, each of these disabled Vietnamese soldiers must kill 50 Cambodians. At the beginning of October, the Vietnamese enemy aggressors sent disabled Vietnamese soldiers to pour toxic chemicals in sources of water used daily by our people and to mix poison into cakes, vegetables, fish, fermented fish and other food on sale in markets in Kompong Trach and Tuk Meas districts and various villages and communes in Kampot Province; this resulted in the deaths of 170 Cambodian inhabitants and the serious poisoning of several hundred others. On 16th October, Vietnamese agents mixed poison in fermented fish and white sugar and sold them to our people in the Stugn Treng market and in Sre Russei commune, Thalabarivat district, Stung Treng Province, causing 16 Cambodians to die and many others to become seriously incapacitated. . ." ⁵¹³

506 Tana de Zulueta, "Prison poison death riddle of the jailed mafia banker," *The Sunday Times (UK)*, 23 March 1986; *Reuters*; "Cyanide-Laced Coffee Killed Italian Financier, Says Report," 2 April 1986

507 David Beresford, "Police chief is poisoner, SA court told", *The Guardian (London)*, November 22, 1990

508 *SAPA (South African Press Association)*; "Tea Didn't Work, So He Killed Colleague with Juice: Witness," May 8, 2000; *SAPA (South African Press Association)*; "Basson Discharged on 15 Counts," June 18, 2001

509 *ANC Second Submission to the TRC - Part 6*; "Appendix Seven - Case Studies," available online at: <http://www.anc.org.za/ancdocs/misc/trc2e.html>

510 *BBC Summary of World Broadcasts*; DK radio condemns putting of poison in food by Vietnamese, July 10, 1987

511 *BBC Summary of World Broadcasts*; "DK radios accuse Vietnamese of poisoning wells and food," July 29, 1987.

512 *BBC Summary of World Broadcasts*; "CGDK Health Ministry on SRV "Use of Toxic Chemical Weapons" August 18, 1987

513 *BBC Summary of World Broadcasts*; "DK radio alleges poisoning of Cambodians by SRV soldiers", October 30, 1987

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1987	Unknown	Cambodia	Chemical	100	0	"On 9th September, the Vietnamese sent secret agents from Vietnam to put poison in water sources and food sold in market-places in Siem Pang district, Stung Treng Province; 100 died and many hundreds more have been affected." ⁵¹⁴
1987	Thallium	Iraq	Chemical	0	30	"Amnesty International said up to 30 other people were poisoned with thallium, none fatally, in separate incidents in October and November, in a campaign aimed at members of Kurdish separatist groups waging a guerrilla war against the government of Iraqi President Saddam Hussein." ⁵¹⁵
1987	Thallium	Iraq	Chemical	3	7	"In one case, last Nov. 4, 10 people in the northern Iraqi town of Marga became seriously ill after drinking a yogurt beverage laced with thallium by a woman suspected of being an Iraqi agent, the Amnesty statement said. Three of the victims were reported to have died within hours and the others were reported hospitalized in Iran." ⁵¹⁶
1987	Thallium	Iraq	Chemical	6	30	"The poison used was thallium, which is more usually associated with rat poison. It cannot be detected by taste and only affects the victims hours afterwards, damaging the lungs, kidneys, liver and heart and making the hair fall out. It is fatal in heavy doses. Six Kurds have already died and more than 30 have been made ill... Last night, at their secret hideaway, one of the victims, Mr Sami Shores, aged 37, told The Times the poisoning was carried out in November by a Kurdish woman in her mid-twenties who had infiltrated the caves they were using as their base by taking up a job as a cook." ⁵¹⁷
1988	Unknown	Burma	Chemical	0	0	"It has also unearthed a plot to poison demonstrators. The main source of money and food for the students' campaign has come from the public. The students found several Government agents masquerading as sympathisers who had donated poison food." ⁵¹⁸
1988	Unknown	Burma	Chemical	0	0	"Thursday's march was largely peaceful, but sources said a mob killed two men and a woman who gave poisoned ice water to several demonstrators, including schoolchildren. The sources said that after the trio confessed to having been paid \$42 each to poison protesters, a mob dragged them outside a monastery, beat them to death and beheaded them, hanging their heads on posts at a major intersection. It was not clear whether any protesters were poisoned." ⁵¹⁹
1988	Unknown	Cambodia	Chemical	38	0	"The Vietnamese enemy put poison in wells, ponds, and foodstuffs on sale in market places in Kompong Pou village, Kompong Pou commune, Krakor district, Pursat Province, on 20th April, killing 38 people who drank the water or ate the poisoned food and incapacitating several others. This is an extremely savage crime committed by the Vietnamese enemy aggressors." ⁵²⁰
1988	Unknown	Haiti	Chemical	1	0	Col. Jean-Claude Paul, Cmdr of Dessalines Battalion, allegedly died from poisoned pumpkin soup. ⁵²¹
1988	Unknown	Sudan	Chemical	0	0	"Reliable SPLA sources in Juba have informed Radio SPLA that the grain dura [sorghum], which was brought for relief to Juba from Khartoum was discovered poisoned on the 18th January 1988. According to the sources, when Prime Minister Sadiq al-Mahdi was informed about the discovery by the Governor of Equatoria, Sadiq reacted angrily against the report and immediately ordered for the expatriate doctor who allegedly discovered the poison to report to Khartoum. Following the discovery of the poison, our sources say the citizens went to the streets demonstrating against the government's attempt to poison them. The sources further revealed that the Bari nationals serving in the army, police, prisons and wildlife have refused to obey orders to go for operations and that the government is fearing to take disciplinary measures against the mutineers." ⁵²²
1988	Organophosphates	Turkey	Chemical	2	2000	2,000 Kurdish refugees in a camp at Mardin, eastern Turkey, were allegedly poisoned by toxic organophosphates in the food in June. ⁵²³
1989	Unknown	China	Chemical	0	0	"An article in the 31st July 'Jingji Ribao' said that "one day at noon when the summer sun was scorching hot" officers and troops from martial law units on duty under Peking's Chaoyang flyover had not had a drink for 20 hours and were approached by a man "with an unnatural smile" bearing pails of water. The 40 year-old man encouraged them to drink and left in a hurry. Lt-Col Ding Aiying, regimental commander, and Lt-Col Hou Xianwen, political commissar, found it suspicious and ordered no one to drink. After laboratory tests the buckets of water were found to be spiked with a "deadly toxicant". ⁵²⁴
1989	Pesticide	Swaziland	Chemical	1	0	Muziwakhe Ngwenya, aka Thami Zulu, was an ANC commander who died apparently of tuberculosis, although one doctor's report found traces of a pesticide called Diazon which led people to suspect he'd been poisoned deliberately and fatally. ⁵²⁵

514 *BBC Summary of World Broadcasts*, "Other reports on Indochina; 'Hundreds' poisoned in Stung Treng", September 29, 1987

515 *AP*, "Amnesty International Says Iraq Poisoning Political Opponents", January 12, 1988

516 *The New York Times*, "Rights Group Reports Iraqis Used Rat Poison on Kurds", January 13, 1988

517 Hazhir Teimourian, "Iraqis accused of using female double agent to poison Kurds with yoghurt", *The Times (London)*, January 13 1988

518 Mark Thornton, "On the road to civil war", *The Advertiser*, September 22, 1988

519 Sein Win, "One Million Demonstrate For Democracy; Three Beheaded", *AP*, September 8, 1988

520 *BBC Summary of World Broadcasts*, "DK radio reports poisoning in village by Vietnamese", May 4, 1988

521 *AP*, "Possibility of Poisoning Is Raised In the Death of a Haitian Colonel", November 8, 1988; Michael Norton, "Police Say Ouster Army Officer was Poisoned", *AP*, December 2, 1988

522 *BBC Summary of World Broadcasts*, "Rebels claim relief grain supplies poisoned", February 4, 1988.

523 Press Association, "Kurdish Refugees Poisoned with Chemical," August 14, 1989; *The Washington Times*, "Doctors say Iraq used toxic nerve agents", August 16, 1989; *Human Rights Watch*, "Whatever Happened To The Iraqi Kurds?" March 11, 1991, available at: <http://www.hrw.org/reports/1991/IRAQ913.htm>

524 *BBC Summary of World Broadcasts*, "Attempt to poison martial law troops foiled," August 15, 1989

525 David Beresford, "Poison in the ANC's ranks: The mysterious death of Thami Zulu two years ago continues to haunt the liberation movement of which he was a hero," *The Guardian (London)*, September 6, 1991

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1989	Toxic organophosphate	Turkey	Chemical	0	200	Another incident was alleged via poisoned bread at kurdish refugee camp. ⁵²⁶
1989	Unknown Poison	UK	Chemical	0	0	A number of cartons of eggs in supermarkets in Coventry and London were suspected of being contaminated by members of ALF. "Police found a pinhole next to a red ink mark on the shell with a label bearing the skull and crossbones and the message: 'Warning! Do not eat. These eggs have been poisoned. Contact Police. ALF.' ⁵²⁷
1989	Economy	USA	Chemical	0	0	A caller to the U.S. Embassy in Chile claimed grapes exported to the USA were contaminated with cyanide. Two of the grapes tested by the FDA showed the presence of small amounts of cyanide. Chile and later testing disputes this test result (and even if it was not a false positive, it seems the amount found would not have caused harm). However, USA and a number of other countries stopped Chilean fruit imports. Chile sued for economic damages, but the case was thrown out of court. Given that this seems to be a hoax incident, it is in this section. ⁵²⁸
1989	Unknown	Zambia	Biological	2	0	Jackie Mabusu and another person were given poisoned beer at a Lusaka nightclub. ANC submissions to the South African TRC also mention the deaths from poisoning of "Mandla Msibi, who died in 1982 in Swaziland, Samuel Phinda who died in Mozambique, and Themba Ngesi who died of poisoning in Mozambique in September 1986" (although it is not clear in these cases how the poison was administered). ⁵²⁹
1990	Cyanide	Nigeria	Unknown	0	1	George Satioti was allegedly given cyanide-laced food at a Nairobi hotel. ⁵³⁰
1990	Toxic organophosphate	Turkey	Chemical	1	1000	Poisoned bread at kurdish refugee camp. ⁵³¹
1990	Rat poison	UK	Chemical	0	0	A tablet of rat poison was found in an item at a factory which supplied pork pies and other meat products to Marks & Spencers. ⁵³²
1990	Arsenic	USA	Chemical	0	0	Arsenic was found in the system of Frank Reed, a hostage held in Beirut, leading some to suspect he'd been poisoned by his captors. Doctors were unable to rule out the arsenic poisoning was unintentional. ⁵³³
1991	Unknown	Ethiopia	Unknown	30	0	"The Weyane [TPLF] group is killing our compatriots with poison... I myself have seen more than 30 people die from the poisoned food, said the teacher who escaped from the TPLF prison... that the TPLF combatants feed poison to Ethiopians they detain in various places. They feed them poison as if they were rats. Some of the people become unconscious and some die immediately. This is TPLF democracy." ⁵³⁴
1991	Unknown	UK	Unknown	0	1	An IRA prisoner, Sean O'Callaghan, was apparently injured in an attempt to poison him via coffee. ⁵³⁵
1992	Organo-Phosphate	Iraq	Chemical	0	0	Newspaper reports Saddam's security services were poisoning the waterways where marsh Arabs lived, using "organo-phosphorus poison, brand name Endrine 192." ⁵³⁶
1993	Potassium Cyanide	Australia	Chemical	0	2	An anonymous caller notified police that pies at a manufacturer were tainted with potassium cyanide. There are no reports that it was as part of an extortion attempt against the manufacturer. Two people are reported to have become ill as a result of eating contaminated pies; however, a later report states that the contamination claim was false. ⁵³⁷
1993	Unknown	Togo	Chemical	15	0	"Fifteen people, who were members of the Togolese opposition 'committee of action for the renewal,' died of poisoning during a police detention from thursday night to friday morning... Police said the poison was contained in the food provided by the fellow members of the opposition group. However, an investigation is being launched into their deaths to determine the origin of the poison." ⁵³⁸
1994	Unknown	Cambodia	Chemical	0	0	"Soldiers deployed in the southwestern Cambodian province of Kampot have fallen ill (Friday) after drinking what is believed to be poisoned water. The area where the soldiers were stricken is near the location where three Westerners have been held hostage by the Khmer Rouge since July 26." ⁵³⁹
1994	Morphine	China	Chemical	1	0	An Australian was found unconcious while on a business trip to China. He was brought back to Australia and died a few months later. Doctors suspected he was poisoned by a large dose of morphine in a drink, but no conclusive evidence was reportedly found. ⁵⁴⁰

526 *Human Rights Watch*, "Whatever Happened To The Iraqi Kurds?" March 11, 1991, available at: <http://www.hrw.org/reports/1991/IRAQ913.htm>

527 Mark Ellis, "Rights group says it poisoned shop eggs; Animal Liberation Front", *The Times (London)*, February 22 1989

528 Philip J. Hiltz, "Don't Eat Grapes, FDA Warns: Cyanide Traces Found In Fruit From Chile After Phone Threat." *The Washington Post*, March 14, 1989; *The Financial Post (Toronto, Canada)*, "Ottawa had to act on Chilean fruit," March 16, 1989; Deborah Mesce, "Chileans Charge U.S. Officials Contaminated Grapes," *AP*, September 10, 1990; *UPI*, "Chilean grape growers sue U.S. over cyanide scare," February 13, 1992; William R. Long, "New Information Suggests '89 Grape Scare was Hoax," *Philadelphia Inquirer*, January 2, 1995.

529 *ANC Submission to the TRC*, "The National Party, Apartheid and the Anatomy of Repression in South Africa, 1948-1994", available at: <http://www.anc.org.za/ancdocs/misc/trc04.html>

530 *Africa News*, "Former VP Could Have Been Given Cyanide," January 11, 2004

531 *Human Rights Watch*, "Whatever Happened To The Iraqi Kurds?" March 11, 1991, available at: <http://www.hrw.org/reports/1991/IRAQ913.htm>

532 *Press Association*, "Rat Poison found in Food at Factory," August 25, 1990

533 Tony Rogers, "Traces of Arsenic Found in Former Hostage Reed's System," *AP*, June 8, 1990

534 *BBC Summary of World Broadcasts*, "Ethiopia allegation that TPLF is giving prisoners poisoned food", April 4, 1991

535 Deric Henderson, "Royal Plot Terrorist 'Poisoned in Jail,'" *Press Association*, November 29, 1992

536 Shyam Bhatia, "Murder of the Marshes," *The Observer (London)*, February 28 1993

537 *The Advertiser*, "Harmful substance found in meat pies," June 5, 1993; *The Herald Sun*, "Poison Pies Hit Pair," June 8, 1993; *AAP Newsfeed*, "Fed: Chronology of Recent Contamination Scares," March 17, 2000; Annabelle McDonald, "Contaminations a costly trend," *Weekend Australian*, July 2, 2005

538 *Xinhua General News Service*, "Fifteen People Die in Police Detention in Togo," August 27, 1993; *The Independent (London)*, "Togo poison row", August 28, 1993

539 *UPI*, "Cambodian troops drink poisoned water", September 30, 1994

540 Bill Power, "Illness blamed on poison", *The Advertiser*, April 4, 1994

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1994	Thallium	Iraq	Chemical	2	7	Ibrahim "Abu Ali" al-Nasiri, one of the leaders of the post-Gulf War I uprising in Southern Iraq, was poisoned with thallium along with 8 other members of the group. Two subsequently died. ⁵⁴¹
1994	Unknown	Iraq	Chemical	0	0	"A team from the Overseas Development Administration (ODA), the first official aid organisation to visit the area in recent years, found evidence that the Marsh Arabs, much of whose ancient homeland has been drained by the Iraqi government, are being poisoned by chemicals put into their water supply by the authorities." ⁵⁴²
1994	Unknown	Japan	Biological	0	0	Aum Shinrikyo leaders and unidentified police sources alleged that Aum fed germ-laced meals to wayward members at a dinner, and that they subsequently disappeared. ⁵⁴³
1995	Thallium	Iraq	Chemical	3	7	Amnesty International and the Iranian news agency reported a number of Kurdish opposition figures poisoned by thallium. ⁵⁴⁴
1995	Cyanide	Tajikistan	Chemical	15	53	Champagne purchased outside a Russian military base was tainted with cyanide, killing a number of Russian peacekeepers and officials, as well as civilians. One report quotes an unnamed security official stating that the wine came from a licenced supplier, indicating that the contamination was intentional, while other reports note that locally bottle liquor in the region is often unintentionally adulterated. The BBC translation of an Interfax (Russian) reports that the results of an investigation would determine whether this was a case of intentional adulteration of the champagne, or whether the accidental byproduct of poor locally-manufactured and bottled champagne. ⁵⁴⁵
1995	Flea poison / Pesticide.	Thailand	Chemical	1	0	Reports in 1995 give the autopsy results as pesticide, while later puts it at flea poison. Possible same ingredients in both. Look Pla, the wife of Prince Thitipan Ukol, allegedly confessed to putting the flea poison in his coffee. ⁵⁴⁶
1997	Unknown	Northern Ireland	Chemical	0	1	Aaron Rocket, imprisoned for armed robbery and linked to a UVF brigade, claimed someone was slipping poison into his food in prison. ⁵⁴⁷
1997	Unknown	Serbia	Chemical	6	144	"More than 150 Serbs waiting outside the German and Swiss consulates in Belgrade to obtain permission to enter the two countries have fallen prey to robbers who gave them drinks laced with poison, and six of them died, a weekly paper said Wednesday. The Belgrade-based Nedeljni telegraf, quoting the brother of one victim as well as a policeman, said in the past few weeks the visa applicants had been offered soft drinks or coffee laced with sleeping pills or other hazardous chemicals by "sympathetic" fellow countrymen. The victims were robbed of their possessions after falling asleep." ⁵⁴⁸
1997	Unknown	Tanzania	Chemical	1	4	Maria Zakaria Robby mixed poison into food and gave it to her children. ⁵⁴⁹
1998	Unknown	Burma	Chemical	400	100	"Shan human rights activists said Tuesday that Myanmar's (Burma's) military junta had poisoned the water supply of 10,000 Shan villagers, killing at least 400 of them since last May. The allegations of mass poisoning were made in a detailed report sent via the internet to diplomats and news agencies by the Shan Human Rights Foundation (SHRF), a non-government organization based along the Thai-Myanmar border. The group claimed that since May 1998 more than 400 Shan villagers have died with symptoms of poisoning in the central Shan state district of Parg Long. The group's report, based primarily of refugee accounts, could not be independently verified. According to Shan human rights activists and villagers, the sudden deaths began occurring after the dumping by the Myanmar military of thousands of poisoned rats into the Prawn River, the only source of water for the more than 10,000 residents of 144 villages in Parg Long." ⁵⁵⁰
1998	Thallium	Iraq	Chemical	2	0	Taha Al-Ahbabi and Ahmad al-Duri, both former security and intelligence directors in the Iraqi government, were allegedly poisoned by thallium placed in his food. ⁵⁵¹
1998	Thallium	Iraq or Iran	Chemical	0	80	Allegations surfaced that Kurdish refugees had their food contaminated with thallium, either by agents working for the Iranian or Iraqi governments. ⁵⁵²
1999	Various	Australia	Chemical	0	0	Prisoners, part of segregated wing housing sex offenders, alleged that their food (prepared by prisoners from another part of the facility) was contaminated on various occasions with "chemicals, poison, saliva and even dead animals." ⁵⁵³

541 Julie Flint, "Saddam's Dreadful Ingenuity in the Hunt for Opponents," *The Guardian (London)*, October 13, 1994

542 David Orr, "Iraq 'poisons Marsh Arabs'; Mass exodus into Iran as Saddam assault threatens to destroy habitat," *The Independent (London)*, November 27, 1994

543 AP, "Report: Cult Tested Germs on Wayward Members", June 18, 1995; Tim Ballard et al., *Chronology of Aum Shinrikyo's CBW Activities*, Monterey Institute, Center for Nonproliferation Studies, 13 March, 2001, available at: http://cns.mis.edu/pubs/reports/pdfs/aum_chrn.pdf

544 See, *Amnesty International USA*, "Iraq," Amnesty International Report 1996, available online at: www.amnestyusa.org/countries/iraq/1996.pdf; *BBC Summary of World Broadcasts*, "Poisoned" opposition figures being treated in Tehran hospital - Iranian report", September 8, 1995

545 UPI, "Champagne kills 10 in Tadjikistan," January 2, 1995; *Reuters*, "Poisoned champagne kills 10 in Tajikistan," January 2, 1995; *Agence France-Presse*, "Six Russian Soldiers Killed by Islamic Rebels in Tajikistan," January 3, 1995; *Charleston Daily Mail*, "Death Toll Mounted Today in a Poisoning Case," January 3, 1995; Yuri Kushko, "Tajik rebels kill seven, take hostages in raid," *Reuters*, January 3, 1995; *BBC Monitoring Service*, "Death Toll in Champagne Poisoning Rises to 15," January 6, 1995; *The Guardian (UK)*, "Tajik Struggle is Lethal Brew for Moscow," February 11, 1995.

546 UPI, "Autopsy Finds Poison in Thai Prince's Body", August 31, 1995; AP, "Autopsy Shows Thai Prince Died of Pesticide Poisoning," September 11, 1995; *Wired Magazine*, "Thai Confession," July 18, 1997. Available at: <http://www.wired.com/culture/lifestyle/news/1997/07/5311>

547 *Belfast News Letter (Northern Ireland)*, "Inmate Makes Poison Claims," January 14, 1997

548 *Deutsche Presse-Agentur*, "Six die after being offered poison drinks in Belgrade," July 9, 1997

549 *Xinhua News Agency*, "Mother Poisons 4 Children," November 19, 1997.

550 *Deutsche Presse-Agentur*, "Shan human rights group accuses Myanmar junta of poisoning villagers", February 23, 1999; William Barnes, "Poisoned Rats Used to Kill Refugees," *The South China Morning Post*, February 23, 1999

551 *BBC Summary of World Broadcasts*, "Death of intelligence head linked to Uday assassination attempt," October 16, 1999; *BBC Summary of World Broadcasts*, "Former security head Duri reportedly dying of Thallium poisoning," December 22, 1999

552 *BBC Summary of World Broadcasts*, "Official on cases of poisoned Iranian Kurds, 'dire need' for medicine," April 15, 1997; *BBC Summary of World Broadcasts*, "Opposition figure says 'regime agents' admit poisoning Kurds," April 17, 1997; *Iranian Refugees Alliance*, "Unsafe Haven: Iranian Kurdish Refugees in Iraqi Kurdistan, available at: www.irainc.org/text/pub/Nlreport.pdf

553 George Warner, "Prisoners allege poison in food," *Hobart Mercury (Australia)*, April 9, 1999

APPENDIX 2: INCIDENTS OF INTENTIONAL CONTAMINATION (UNCONFIRMED)

1999	Rat poison	China	Chemical	0	48	This reference (apparently from the Monterrey WMD Database) notes that 48 people were poisoned "as a result of eating contaminated meat rolls at a fast food restaurant in Deyang City, China. The meat rolls had been tainted with rat poison, which police believed was deposited in the rolls by an enemy of the restaurant's owner." However, no reference to this incident can be found via LexisNexis or other news sources. ⁵⁵⁴
1999	Rat poison	China	Chemical	0	48	This reference (apparently from the Monterrey WMD Database) notes that 48 people were poisoned "as a result of eating contaminated meat rolls at a fast food restaurant in Deyang City, China. The meat rolls had been tainted with rat poison, which police believed was deposited in the rolls by an enemy of the restaurant's owner." However, no reference to this incident can be found via LexisNexis or other news sources. ⁵⁵⁵
1999	Unknown	Indonesia	Chemical	0	300	"An estimated 300 Acehese refugees have been hospitalized after eating food local activists claim was poisoned by provocateurs, medical officials and political activists said Tuesday." ⁵⁵⁶
1999	Thallium	Iraq	Chemical	1	0	Husam Bahnam Khuduri, chief architect for the Iraqi government, apparently died because of a poisoning attempt. ⁵⁵⁷
1999	Thallium	Iraq	Chemical	0	1	Hamed Idris was allegedly the focus of an unsuccessful poisoning plot. ⁵⁵⁸
1999	Arsenic	Malaysia	Chemical	0	1	Reports indicated that Anwar Ibrahim was poisoned with arsenic slipped into his food while he was in prison. ⁵⁵⁹
1999	Unknown	South Africa	Chemical	0	2	Newspaper reports state that two women were arrested in separate incidences of attempting to poison their husbands by adding a substance called "muti" to their porridge. ⁵⁶⁰
2000	Unknown	Afghanistan	Chemical	2	60	Pate et al. report that a Pakistani newspaper reports that poisoned food killed 2 and injured 60 at a religious school in Jalaludin, Afghanistan. ⁵⁶¹
2000	Cyanide	India	Chemical	2	0	"Consumption of cyanide along with liquor led to the death of two persons in Royapettah on Sunday, police said on Monday." Not clear if accidental or otherwise. ⁵⁶²
2000	Pesticide	India	Chemical	6	0	The Monterey Institute's WMD Terrorism Database apparently contains a reference to a poisoning in India: "On June 20, it was reported that six workers had died in Punjab, India, after two of their colleagues had contaminated food with pesticide. Two suspects were captured within hours of the incident." FYI, no such incidents found in news databases, not included in confirmed incidents. ⁵⁶³
2000	Forgery/Salmonella	Israel	Biological	1	0	Israel's Agricultural Development Authority apparently found a Palestinian ring with a machine for counterfeiting stamps on expired eggs in the hopes of giving Israeli's salmonella. This counterfeit ring was in operation for 18 months; while one Israeli woman was reported to have died of salmonella poisoning during this timeframe, there's no indication she got salmonella from eating old eggs sold with counterfeit stamps. ⁵⁶⁴
2000	Rat poison	USA	Chemical	0	7	The Monterey Institute's WMD Terrorism Database apparently contains a reference to a poisoning attempt in Tennessee: "On October 3 in Hernando, Tennessee, seven employees of a company were hospitalized after drinking coffee contaminated with rat poison." FYI, no reference in open sources can be found to this incident. ⁵⁶⁵
2000	Rat poison	USA	Chemical	0	0	"On October 27, a small group of students at a school in East Montpelier, Vermont, allegedly placed rat poison pellets in rice that was to be cooked for a home economics class." ⁵⁶⁶
2000	Unknown	USA	Chemical	0	0	"On September 9 in Jackson, Michigan, an ice cream stand worker allegedly poisoned the whipped cream he served to customers." ⁵⁶⁷
2001	People	Bangladesh	Chemical	0	0U	A newspaper reports that thieves laced the food of four households in the village of Araishidha, stealing money and items after the family members were incapacitated. The newspaper indicates a number of injuries (no fatalities), but no precise numbers are given. ⁵⁶⁸
2001	Unknown	Japan	Chemical	0	13	"Three people fell into a coma and 10 others were hospitalized Wednesday after eating a lunch at a welfare facility in Nagasu, Kumamoto Prefecture. Officials suspect of poisoning." Not clear if intentional, or a food safety breakdown. ⁵⁶⁹

554 See, Gavin Cameron et al., "1999 WMD Terrorism Chronology: Incidents Involving Sub-National Actors and Chemical, Biological, Radiological, and Nuclear Materials," *The Nonproliferation Review*, Summer 2000, 7(2), available at: <http://cns.miis.edu/pubs/npr/vol07/72/wmdchr72.htm>

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566 Jason Pate et al., *2000 WMD Terrorism Chronology: Incidents Involving Sub-National Actors and Chemical, Biological, Radiological, or Nuclear Materials*, available at: <http://cns.miis.edu/pubs/reports/cbrn2k.htm>

567 Jason Pate et al., *2000 WMD Terrorism Chronology: Incidents Involving Sub-National Actors and Chemical, Biological, Radiological, or Nuclear Materials*, available at: <http://cns.miis.edu/pubs/reports/cbrn2k.htm>

568 *United News of Bangladesh*, "Poison-Loot," October 27, 2001

569 *Japan Economic Newswire*, "Poison suspected at Kumamoto welfare center, 3 in coma", February 21, 2001

APPENDIX 2: INCIDENTS OF INTENTIONAL CONTAMINATION (UNCONFIRMED)

2002	Unknown	Chechnya	Unknown	0	1	The Chechen PM Anatoly Popov was allegedly poisoned with what Russian reports called a "hypotrophic poison" (which is nonsense), a number of breathless newspaper reports followed, but a later reports states that doctors diagnosed it as simply a case of very nasty, but ordinary (unintentional), food poisoning - possibly from bad cheese curds. ⁵⁷⁰
2002	Rat poison	China	Chemical	0	92	"Local police confirmed yesterday that rat poison in a primary school canteen's meals was responsible for Monday's food poisoning of 92 pupils in Central China's Hunan Province." Not confirmed if criminal intention or not. ⁵⁷¹
2002	Tetramine	China	Chemical	0	100	"Nearly 100 students fell sick after eating breakfast... at the school in Danyang, Jiangsu province." Dushuqiang detected. ⁵⁷²
2002	Tetramine	China	Chemical	0	1	"In Beijing, an apartment building maintenance worker was found bleeding from the mouth and nose after he ate twopieces of chocolate from a bag of chocolates he found on a staircase in the building, Beijing Youth Daily said." ⁵⁷³
2003	Rat poison	China	Chemical	0	200	Poisoned at Guanzho factory. Mention in NYT article, but no suggestion there was criminal intention. ⁵⁷⁴
2003	Rat poison	China	Chemical	0	34	Zaoyang, Hubei Province. Mention in NYT article, but no suggestion there was criminal intention. ⁵⁷⁵
2003	Tetramine	China	Chemical	1	24	"Food poisoning at a wedding ceremony has left one dead and 24 others ill in east China's Jiangsu Province. Thirty-one people were eating at the wedding party Thursday in Sihong county. Twenty-five people came down sick shortly into the meal, with the oldest aged 84 and the youngest two. One died on the way to hospital and another is still in a critical condition. Doctors said the poison was "Dushuqiang", a highly toxic rat poison which has been banned nationwide. The case is under investigation by local security authority." ⁵⁷⁶
2003	Tetramine	China	Chemical	0	76	"Food laced with rat poison sickened 76 students - six of them seriously - at a college cafeteria in southern China, the government said Tuesday. The students became ill after eating breakfast Monday at Hechi College in Nanning, the capital of Guangxi region, the official Xinhua News Agency reported." ⁵⁷⁷
2003	Tetramine	China	Chemical	0	28	"Rat poison in food served at an elementary school cafeteria in southeastern China sickened 28 children... at the Wang Gao Primary School in Lanxi, a city in Zhejiang province." ⁵⁷⁸
2003	Unknown	Russia	Unknown	1	0	Yuri Shchekochikhin's symptoms have led some to speculate he was poisoned with thallium or possibly polonium-210. ⁵⁷⁹
2003	Unknown	Serbia	Chemical	0	1	Ljiljana Buha testified in court she was kidnapped by a Serbian gang and forced to poison her husband. An exact date is not given in the newspaper account. Katarina Kratovac, "Witness tells court clan forced her to poison her husband, in gangland trial," November 30, 2005
2004	Tetramine	China	Chemical	2	1	"Poisonous beverage killed two people with another one hospitalized in Nanning City of south China's Guangxi Zhuang Autonomous Region on Monday... Investigations show that the beverage contains 'Dushuqiang'" Xinhua General News Service, "Poisonous beverage kills two people in S. China," May 5, 2004 - Suspicious - Intentional?
2004	Tetramine	China	Unknown	0	74	"A group of 74 people had symptoms of being poisoned after eating scallion-flavored pancakes bought locally Tuesday at a coal mine in Tongchuan City" containing dushuqiang. Suspected of being criminal case. Xinhua General News Service, "Seventy-four down by poisoned food in NW. China province," April 15, 2004
2004	Arsenic	Indonesia	Chemical	0	1	"Security officers found a substance suspected to be arsenic in soup that was to be served to Indonesian Vice President Jusuf Kalla", The New York Times, "World Briefing Asia: Indonesia: Vice President's Soup Had Poison", December 16, 2004
2004	Unknown	Namibia	Criminal	0	1	David Shiigindwa, Fillipus Shikambe and Jason Nadipite allegedly poisoned beer of a customer in Omafo, Ohangwena Province. Absalom Shigwedha, "Poison Case in North Postponed Again," The Namibian, April 1, 2004
2004	Unknown	Pakistan	Criminal	2	0	"A young girl killed her father and a brother by giving them poison in the meal in a village Noorpur (Khanewal) some 60 km east of Multan on Friday." The Pakistan Newswire, "District. Multan: Girl poisons her father, brother", January 17, 2004

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579 Diana Rudakova, "Well-known Russian pro-democratic writer, MP dies aged 54", *TASS*, July 3, 2003; RIA Novosti, "Yabloko: Special Commission to Investigate Deputy's Death," July 3, 2003; Steve Gutterman, "Suspicious Cast on Russia After Poisoning", *AP*, December 14, 2004; Steve Gutterman, "Russian journalist believes colleague, Chechens poisoned with thallium", *AP*, November 21, 2006; *Panorama* (Television Transcript), "How to Poison a Spy," January 24, 2007, available at: <http://news.bbc.co.uk/2/hi/programmes/panorama/6294771.stm>; Julian O'Hallaran, "Russia's Poisoning 'Without a Poison'", *BBC News Online*, February 6, 2003, available at: http://news.bbc.co.uk/2/hi/programmes/file_on_4/6324241.stm;

APPENDIX 2: INTENTIONAL CONTAMINATION OF THE FOOD SUPPLY CHAIN, 1950 - 2008

2004	Unknown	Russia	Unknown	1	0	Roman Tsepov, the owner of a security company in Russia, an alleged leading St. Petersburg crime figure, and ex-bodyguard of Vladimir Putin, was allegedly poisoned with a substance suspected as being a "massive dose of a leukemia drug" or polonium-210. ⁵⁸⁰
2005	Tetramine	China	Chemical	0	53	"A deadly rat poison was responsible for the food poisoning that affected 53 students in north China's Hebei Province on Thursday, the China Daily cited local health agency as reporting on Monday." Police suspect deliberate tampering. ⁵⁸¹ No reports of results of police investigation.
2005	Tetramine	China	Chemical	1	40	Food at a village banquet in Chenjiagou village, Danfeng County, Shaanxi Province, was spiked with dushuqiang. ⁵⁸² Cannot be confirmed an intentional attack or not.
2005	Tetramine	China	Chemical	7	30	A banquet was spiked with dushuqiang in Xiaogan, Hubei province. A cook mistook the poison for starch – we're including it here to highlight the fact that not all dushuqiang poisonings are deliberate or intentional. ⁵⁸³
2005	Unknown	Iraq	Chemical	0	3	Poisoned food was allegedly given to Shia pilgrims in Karbala. ⁵⁸⁴
2005	Unknown	Nigeria	Unknown	4	0	Victoria Sunday is alleged to have poisoned a family of four by spiking their yam yam flour with a contaminate. ⁵⁸⁵
2006	Syringes	Canada	Physical Contaminate	0	0	Three empty syringes were discovered in processed meat products in Ontario, Canada, prompting the company to recall products. "The syringe casings contained a mixture of saline solution and a blood thinning nutrient, neither used at the plant." An employee, Edgar Remmert, was arrested, but the charges were dropped 18 months later. As the charges were dropped, and it is not clear if the syringes found in the plant were the result of an intentional act or an accidental act, it is included here. ⁵⁸⁶
2006	Unknown	Liberia	Unknown	7	6	The residents of a small village in Nimba County, Liberia, allegedly died from eating a deliberately poisoned soup. ⁵⁸⁷
2006	Cyanide	Papua New Guinea	Chemical	10	0	A report stated that cyanide stolen from mining companies in PNG was being sold to people using it to settle scores with enemies, quoting a hospital official linking ten deaths to cyanide poisoning. ⁵⁸⁸
2006	Rat poison	Rwanda	Chemical	1	57	Savera Nyirashongole allegedly was paid to rat poison into a bucket of local beer at a wedding. ⁵⁸⁹
2007	Rat poison	China	Chemical	0	57	"Fifty-seven people were poisoned after they had breakfast laced with rat poison in a restaurant in east China's Zhejiang Province. The first victim felt nauseous and complained of a stomach ache after eating some stuffed buns in a restaurant in the Xixi Town of Yongkang City yesterday." ⁵⁹⁰
2007	Rat poison	China	Chemical	1	202	Fluoroacetamide was apparently added to the water used to make porridge at a hospital in Harbin. ⁵⁹¹
2008	Paperclips	Australia	Physical Contaminate	0	0	Paperclips were found in muffins at Queensland University of Technology at a function for Olympic athletes. It's not clear if it was a case of intentional contamination. ⁵⁹²
2008	Unknown	Nigeria	Unknown	3	0	"Aiyesimi" allegedly poisoned his family's meal and was allegedly "arrested for poisoning the family's drinking water" in 2007. ⁵⁹³
2008	Unknown	Uganda	Unknown	0	0	"Police have arrested two people suspected of attempting to poison Kenyan refugees camped at the Uganda-Kenyan border town of Malaba...the suspects, whose identity haven't been disclosed, were arrested while trying to mix poison in a sack of maize flour that was donated to the refugees... The first incident occurred recently when an unidentified man sneaked into the kitchen at the refugee camp and allegedly mixed poison in soup." ⁵⁹⁴

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582 *China Daily*, "Poisoning Kills Girl, Affects 40," November 11, 2005.

583 *BBC Worldwide Monitoring*, "Banquet guests found to have consumed rat poison in China's Hubei", July 23, 2005; *AP*, "China says rat poison killed nine people, sickened 95 in last three months of 2005," February 13, 2006

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ABOUT CENS

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