

Table 1: Search terms for major concepts and specific biological and chemical contaminants.

Concept/contaminant	MeSH terms	Keywords and alternative names
Foodborne disease	Exp foodborne diseases Gastroenteritis Food Safety	Foodborne disease? Foodborne illness* Foodborne infection? Food-borne disease? Food-borne illness* Food-borne infection? Food borne disease? Food borne illness* Food borne infection? Food safety Food poison* Gastroenteritis
Waterborne disease	Waterborne diseases	Waterborne disease? Waterborne illness* Waterborne infection? Water-borne disease? Water-borne illness* Water-borne infection? Water borne disease? Water borne illness* Water borne infection?
Contaminants	Food contamination Food quality Food safety	Food contaminant? Food contamination Food quality Contaminated food Food safety
Bacillus cereus	Bacillus cereus	Bacillus cereus
Brucella	Exp brucella Brucellosis	Brucella Brucellosis Cyprus fever Gibraltar fever Malta fever Rock fever Undulant fever
Campylobacter	Exp campylobacter Campylobacter infections	Campylobacteriosis Campylobacter*
Clostridium botulinum	Exp clostridium botulinum Clostridium perfringens Clostridium infections Botulism	Clostridium botulinum Botulism Clostridium perfringens Clostridium welchii Clostridial AND food*
Escherichia coli	Escherichia coli Enteropathogenic escherichia coli Enterotoxigenic escherichia coli	Escherichia coli Vtec Ehec Etec

	Exp shiga-toxigenic escherichia coli Enterobacteriaceae infections Dysentery, bacillary Escherichia coli infections Shiga toxin Escherichia coli O157 Enterohemorrhagic escherichia coli	Stec Shiga toxin*
Helicobacter pylori	Helicobacter infections Helicobacter pylori	Helicobacter pylori Campylobacter pylori* Helicobacter nemestrinae
Listeria	Exp listeria Listeriosis	Listeria Listeriosis
Salmonella	Exp salmonella Exp salmonella infections	Salmonella Salmonellosis Paratyphoid fever Typhoid Typhus Enteric fever Enteritidis Infantis Typhimurium Concord
Shigella	Exp shigella Dysentery, bacillary	Shigella Shigellosis Bacillary dysentery Shigella adj10 dysentery
Staphylococcus aureus	Exp staphylococcus aureus Staphylococcal infections Staphylococcal food poisoning	Staphylococcus aureus Staphylococcal AND food* Staph AND food*
Vibrio	Exp vibrio Exp vibrio infections Cholera	Vibrio Vibriosis Cholera Parahaemolyticus Vulnificus
Yersinia	Yersinia Yersinia enterocolitica Yersinia pseudotuberculosis Yersinia infections Yersinia pseudotuberculosis infections	Yersinia Yersiniosis
Aeromonas	Exp aeromonas	Aeromonas
Entamoeba histolytica	Entamoeba histolytica Amebiasis Dysentery, amebic Entamoebiasis	Entamoeba histolytica Amebiasis Amoebiasis

		Amebic adj10 (dysentery OR colitis) Amoebic adj10 (dysentery OR colitis) Entamoebiasis
Cryptosporidium	Exp cryptosporidium Cryptosporidiosis	Cryptosporidium Cryptosporidiosis
Cyclospora	Cyclospora Cyclosporiasis	Cyclospora Cyclosporiasis
Giardiasis	Exp giardia Giardiasis	Giardia Giardiasis Lambliasis
Legionella	Exp legionella Exp legionellosis	Legionella Legionellosis Legionnaire\$ disease Pontiac fever
Toxoplasma	Toxoplasma Toxoplasmosis	Toxoplasmosis Toxoplasma
Trichinella	Exp trichinella Trichinellosis	Trichinella Trichinellosis Trichinelliasis Trichinosis
Adenovirus	Adenoviruses, human	Adenovirus
Astrovirus	Mamastrovirus Astroviridae infections	Astrovirus
Hepatitis A	Hepatitis A Exp hepatitis A virus	Hepatitis A
Hepatitis E	Hepatitis E Hepatitis E virus	Hepatitis E
Norovirus	Exp norovirus	Norovirus Norwalk virus
Rotavirus	Rotavirus Rotavirus infections	Rotavirus
Sapovirus	Sapovirus	Sapovirus Sapporo virus
Pseudomonas aeruginosa	Pseudomonas aeruginosa Pseudomonas infections	Pseudomonas aeruginosa Pseudomonas
Naegleria fowleri	Naegleria fowleri	Amebic meningoencephalitis Amoebic meningoencephalitis Naegleria fowleri
Schistosoma	Schistosoma Exp schistosomiasis	Schistosoma Schistosomiasis Bilharziasis Katayama fever Swimmer's itch Cercarial dermatitis

Cyanobacteria	Cyanobacteria Exp cyanobacteria toxins Anatoxin A	Cyanobacteria Cyanotoxin? Anatoxin-a
Aphanizomenon	Aphanizomenon	Aphanizomenon B-methylamino-l-alanine Bmaa
Cylindrospermopsin?	Cylindrospermopsis Cylindrospermopsin	Cylindrospermopsin? Cylindrospermopsine? Cylindrospermopsis 7-epi-cylindrospermopsin?
Lyngbya	Lyngbya Lyngbya toxins	Lyngbya Lyngbya toxin? Lyngbyatoxin? Plectonema
Microcystis	Microcystis Microcystins	Microcystis Microcystin?
Planktothrix	Planktothrix Oscillatoria	Planktothrix Oscillatoria
Phormidium	Phormidium	Phormidium
Anabaena		Anabaena Dolichospermum
Spirulina	Spirulina	Spirulina
Amygdalin	Amygdalin	Amygdalin Vitamin B17 Neoamygdalin Amygdaloside
Lectins	Plant lectins Phytohemagglutinins Wheat germ agglutinins	Lectins Haemagglutinin? Phytohemagglutinin? ((Kidney bean) adj3 (lectin?)) ((Wheat germ) adj3 (agglutinin? Or lectin?))
Mycotoxin	Exp mycotoxins Mycotoxycosis	Mycotoxin? (Fungal adj8 toxin?) Mycotoxycosis (Mushroom adj8 poison*)
Aflatoxin	Exp aflatoxins	Aflatoxin? Aflatoxycosis
Glycoalkaloid		Glycoalkaloid? Pyrrolizidine alkaloid?
Marine toxin	Marine toxins	Marine toxin? Marine biotoxin? Aquatic biotoxin? Aquatic toxin?
Ciguatoxin	Ciguatera poisoning Ciguatoxins	Ciguatoxin? Ciguatera fish poisoning Ciguatera

Saxitoxin	Shellfish poisoning Saxitoxin	Saxitoxin? Paralytic shellfish poison* Psp Shellfish poisoning
Okadaic acid	Okadaic acid	Okadaic acid? Dsp Okadaic acid? Diarrhetic shellfish poison*
Domoic acid	Domoic acid	Domoic acid? Amnesiac shellfish poison* Asp
Brevetoxin	--	Brevetoxin? Neurotoxic shellfish poison*
Tetrodotoxin	Tetrodotoxin	Tetrodotoxin? Fugu toxin? Tarichatoxin? Tetradotoxin?
Algal toxins	Harmful algal bloom	Algal toxin? Algal bloom?
Scombrototoxin	Saurine	Scombrototoxin? Scombroid poison* Saurine

Table 2: Search terms for climate variables.

Concept	MeSH terms	Keywords and alternative names
Climate change	Climate change Greenhouse effect Greenhouse gases	Carbon emission? Climate change Climatic change Climate disaster Climate variability Climatic variability Environmental change Global warming Greenhouse effect Greenhouse gas* Planetary health Global environmental change?
Meteorological/climate factors	--	Atmospheric pressure Cold Cool* Extreme weather* Heat Humid* Ice Precipitation Rain*

		Season* Snow* Storm Temperature? Warm* Wind Ultraviolet radiation UV
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Table 3: Search terms for preharvest foods.

Concept	MeSH terms	Keywords and alternative names
Grain crops		Hay Soybean? Grain corn Winter wheat Silage corn Barley Spring wheat Mixed grain? Dry field bean? Oat? Fall rye Canola
Livestock and poultry		Dairy cow? Dairy cattle Beef cow? Beef cattle Steer? Heifer? Calf* Pork Pig* Sheep Lamb? Poultry Broiler* Roaster* Laying hen? Pullet* Turkeys
Fruit crops		Grape? Apple? Peach* Strawberr* Sour cherr* Pear?

		Raspberr* Plum? Sweet cherr*
Vegetable crops		Sweet corn Potato* Green pea? Tomato* Green bean? Wax bean? Carrot? Pumpkin Squash Onion? Cucumber? Pepper? Broccoli Cabbage? Asparagus
Other		Irrigation water

Table 4: Data extraction form.

Publication information	Last Name of first author
	Year
	Title
Research location	Country
	Province/territory/state (if applicable)
Research information	Research objective(s)/question(s) of the study
	Study design
	Quantitative data collection (Y/N)
	Qualitative data collection (Y/N)
	Experimental data collection (Y/N)
Meteorological/climate variables	Temperature
	Precipitation
	UV Radiation
	Extreme heat events
	Extreme cold events
	Air quality
	Drought
	Flooding
	Wildfires
	Hurricanes
	Wildlife changes
	Freshwater conditions
	Ocean conditions

	Ice extent/stability/duration
	Coastal erosion
	Permafrost changes
	Other (describe)
Contaminant variables	Name of contaminant
	Is contaminant biological or chemical?
	If foodborne, what preharvest food(s)?
	Associated foodborne or waterborne illness(es)/ health outcomes
Methods and results	Data collection methods
	Data analysis methods
	Did the discussed climate variable(s) influence a contaminant + preharvest food association? (Y/N)
	Indicate the measure of association/ significance applied
	Indicate the direction of the measure of association/ significance
	Indicate the magnitude of the measure of association/significance
	Was a future projection modelled? (Y/N)
	If yes, describe the projected impacts.