2020 California Pesticide Residue Monitoring Program Report

California Department of Pesticide Regulation

https://www.cdpr.ca.gov/docs/enforce/residue/rsmonmnu.htm

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California Pesticide Residue Monitoring Program

The Department of Pesticide Regulation's (DPR) California Pesticide Residue Monitoring Program (CPRMP) samples and tests for pesticide residues in domestically grown and imported fresh produce. The CPRMP enforces pesticide residue tolerances set by the U.S. Environmental Protection Agency (U.S. EPA). A tolerance is the maximum residue level of a specific pesticide allowed on human or animal food in the United States. The Code of Federal Regulations, Chapter 40, Part 180, lists tolerances and dictates how to analyze raw agricultural commodities for pesticide residue testing. U.S. EPA establishes tolerances based on the pesticide toxicity, how much and how often the pesticide is applied, and how much of the pesticide remains in or on the commodity. DPR has the authority to levy civil penalties against anyone who packs, ships, or sells produce with illegal pesticide residues.

CPRMP staff sample a wide range of fruits and vegetables collected at sites where produce is sold, packed, or distributed. DPR's sampling program is designed to meet the goal of preventing "public exposure to illegal pesticide residues" (Food and Agricultural Code 12532) and focuses on the following high-risk commodities:

- Produce highly consumed by infants and children.
- Produce treated with pesticides listed under Proposition 65 as carcinogens or reproductive toxins.
- Produce reflective of consumption patterns among different ethnic and socioeconomic groups.
- Produce which has a history of detected illegal pesticide residues.
- Produce originating from countries with a history of detected illegal pesticide residues.

Produce sampling is not designed to be statistically representative of the overall rate of residue levels for a particular pesticide, commodity, or place of origin. As a result of collecting samples based on the factors noted above, results are biased towards finding produce more likely to have pesticide residues than if samples were collected in a random statistical fashion. The number of samples of a given commodity may not be large enough to make generalizations about the pesticide residue levels for the entire volume of that commodity in trade.

DPR contracts with the California Department of Food and Agriculture's (CDFA) Center for Analytical Chemistry. Their ISO 17025 accredited laboratories analyze samples for nearly 500 different pesticides and pesticide breakdown products. ISO/IEC 17025 accreditation is the standard for testing and calibration laboratories worldwide.

If illegal residues are found, DPR immediately removes and quarantines the illegal produce from the channels of trade. In addition, if the owner of the commodity has similar produce from the same source, DPR quarantines those lots unless and until subsequent laboratory testing determines they are free from illegal residues. Further, DPR traces the distribution of the illegal produce by contacting distributors throughout California, imposing quarantines and conducting additional sampling and testing.

2020 Pesticide Residue Monitoring Sampling Results

In 2020, DPR, along with its sister California Environmental Protection Agency boards, departments, and offices, remained committed to safeguarding public health, safety, and the environment during the COVID-19 pandemic. This commitment included continuing to protect the public from consumption of illegal residues by sampling and testing produce throughout the statewide pandemic lockdown. In 2020, 2,892 produce samples were collected. That number was 20% fewer than the average number samples collected over the previous five years (3,564 average samples per year), though, due to disruptions to the food supply chain, local stay at home orders, social distancing requirements, and other COVID-19 related restriction.

CPRMP staff collected samples from approximately 500 different businesses in 2020 (Figure 1). These included wholesale and retail outlets, terminal markets, distribution centers, and roadside and farmers markets. Ninety-five percent of the produce samples collected by DPR had either no detectable pesticide residues or legal residue levels below the applicable U.S. EPA tolerance (Figure 2).

Illegal pesticide residues were found in 149 samples (5%, see Appendix 1 for the table of all illegal commodity samples). The majority of illegal samples (132, 89%), involved the detection of pesticide residues with no established federal tolerance, meaning any detected residue level was illegal.

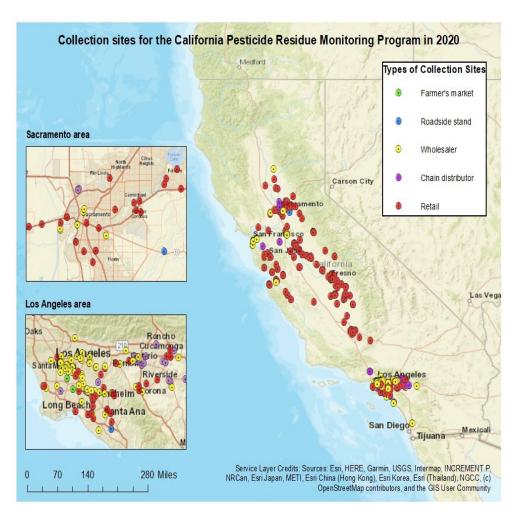


Figure 1. Map of sampling sites in 2020

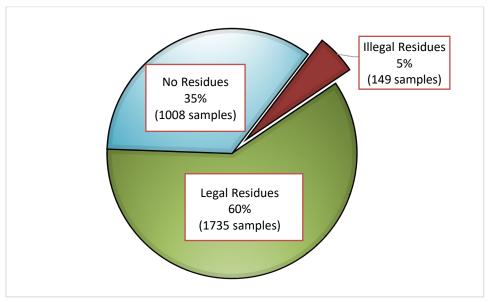


Figure 2. Percentage of produce samples with no residues, legal residues, or illegal residues detected in 2020

Country of Origin

Over half of the samples collected in 2020, or 1,631 samples (56%), were grown domestically, while 1,243 samples (43%) of the samples were imported (Figure 3). The remaining 18 samples (1%) were of undetermined origin due to a lack of information on the containers.

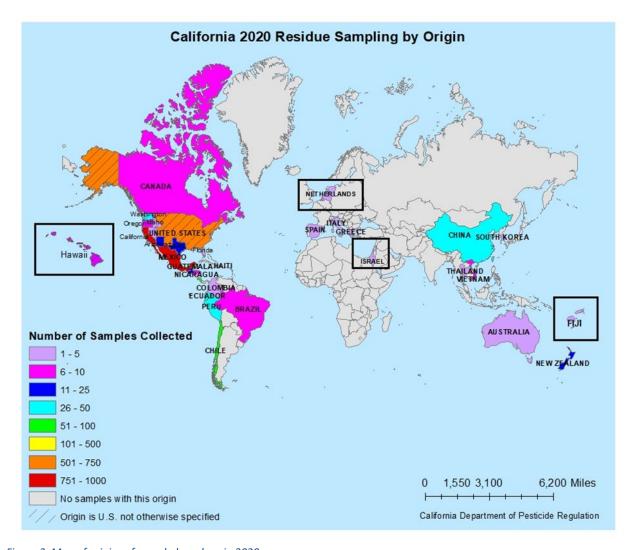


Figure 3. Map of origins of sampled produce in 2020.

Most illegal residues were on imported produce, accounting for 116 (78%) of the 149 produce samples with illegal residues (Figure 4). The violation rate for imported produce samples was nearly five times higher than domestic samples (9% of imported samples had illegal residues versus 2% of domestically grown samples). In 2020, illegal residues were found on commodities originating from ten different countries (Table 1).

Samples in Violation of US EPA Tolerances Domestic vs. Imported

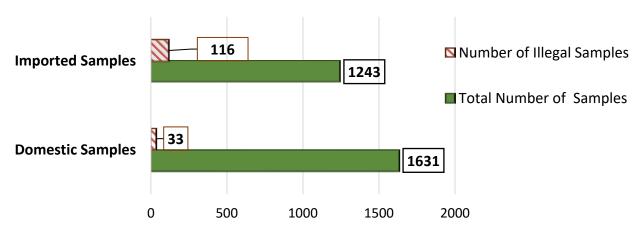


Figure 4. Sample result comparison between domestic and imported produce samples

Table 1. Number of illegal produce samples collected in 2020 by country of origin.

Country of Origin	Number Illegal	Total Number	Percent Illegal
Chile	2	64	3%
China	8	44	18%
Costa Rica	6	54	11%
Ecuador	6	26	23%
Guatemala	5	24	21%
Mexico	75	915	8%
Peru	6	37	16%
Thailand	1	2	-
US, Arizona	3	16	-
US, California	27	899	3%
US, Florida	2	3	-
US, Texas	1	11	-
Vietnam	7	9	_1

6

¹ - percent not calculated due to sample size <20

Commodity Results

In 2020, the program sampled 136 different types of fresh fruits and vegetables (see Appendix 2 for the list of all sampled commodities). Illegal residues were found in 50 different commodities (Figure 5).

Dietary Risk Assessments

DPR's Human Health Assessment Branch (HHA) reviews the toxicity for each illegal pesticide residue. A dietary risk assessment is conducted to determine whether the residues pose a potential acute health risk to consumers. Assessments are based on consumption rates for the produce and acute reference doses for that pesticide or combination of pesticides. A human health risk is determined by measuring the level of residue in the produce eaten at a defined consumption level (mg/kg) in a single day. If HHA determines the produce may pose a potential health risk to consumers, DPR notifies and collaborates with the California Department of Public Health and the U.S. Food and Drug Administration to remove it from the channels of trade.

In 2020, HHA determined 26 samples (12 different commodities from 4 countries), were potential health risks to consumers and were removed from the channels of trade. In all 26 samples, the potential health risks were due to illegal residues of organophosphates or carbamates (Table 2).

California Produce Sample Results

California grown produce accounted for more than 55% (899 samples) of all domestic samples tested. This value likely underrepresents the true number of California grown produce collected, as sampled commodities labeled as "product of USA" are potentially grown in California. For illegal residue samples, DPR does a trace back investigation to determine the source of the produce. However, for legal residue samples, DPR does not do a trace back investigation and is unable to determine, based on labeling alone, the state of origin for produce labeled "product of USA".

Over 97% of the samples labeled as grown in California had legal or no residues detected on them. Of the 899 California samples tested, only 3% of the samples had illegal residues (27 samples). One illegal spinach sample collected in Watsonville, CA and grown in Monterey County was determined to pose a potential acute health risk to consumers. Of the 82 different types of California grown commodities tested, seventeen different commodities had at least one sample with illegal pesticide residues (Table 3).

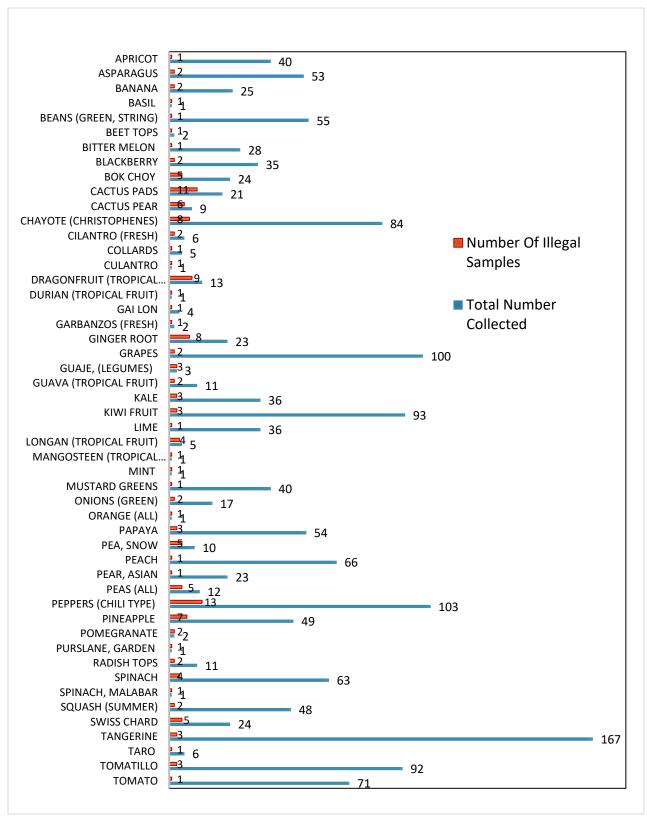


Figure 5. Commodities with illegal residue in 2020.

Table 2. Illegal pesticide residues determined to be potential health risks in 2020.

Sample Number	Sample Date	Commodity	Origin	Health Concern Residues
A20M00187	3/2/2020	Cactus Pads	Mexico	Chlorpyrifos, Dimethoate, Malathion, Methomyl, and Monocrotophos
A20M00226	3/9/2020	Cactus Pads	Mexico	Carbofuran, Dimethoate, Malathion, Methomyl, and Monocrotophos
R20M00307	3/9/2020	Cactus Pads	Mexico	Chlorpyrifos, Diazinon, Methomyl, and Monocrotophos
A20M00228	3/9/2020	Chayote	Mexico	Methamidophos
A20M00321	4/6/2020	Cactus Pads	Mexico	Chlorpyrifos
A20M00322	4/6/2020	Cactus Pads	Mexico	Dimethoate and Methomyl
R20M00428	4/13/2020	Chayote	Mexico	Dimethoate
A20M00398	4/21/2020	Guaje	Mexico	Dimethoate
A20M00464	5/4/2020	Dragonfruit	Ecuador	Chlorpyrifos
A20M00473	5/5/2020	Spinach	US, California	Chlorpyrifos
R20M00521	5/6/2020	Pear, Asian	China	Chlorpyrifos
A20M00503	5/11/2020	Cactus Pear	Mexico	Acephate, Chlorpyrifos, Dimethoate, Methomyl, and Monocrotophos
A20M00521	5/12/2020	Guaje	Mexico	Dimethoate
A20M00565	5/26/2020	Blackberry	Mexico	Methamidophos
R20M00611	5/26/2020	Chayote	Mexico	Methamidophos
R20M00965	8/10/2020	Purslane	Mexico	Carbofuran
R20M01137	8/31/2020	Cactus Pear	Mexico	Monocrotophos
A20M00806	9/29/2020	Cactus Pads	Mexico	Chlorpyrifos
R20M01328	10/5/2020	Tomatillo	Mexico	Methamidophos and Monocrotophos
R20M01423	10/13/2020	Cactus Pads	Mexico	Chlorpyrifos
A20M00888	10/19/2020	Pepper (Chili)	Mexico	Monocrotophos
R20M01537	11/2/2020	Guaje	Mexico	Carbofuran and Methamidophos
R20M01561	11/9/2020	Cactus Pads	Mexico	Dimethoate
A20M01102	11/30/2020	Beans, Green	Mexico	Acephate and Methamidophos
R20M01637	11/30/2020	Cactus Pads	Mexico	Monocrotophos
A20M01155	12/15/2020	Beans, Green	Mexico	Acephate

Table 3. Commodities grown in California with illegal pesticide residues detected in 2020

Commodity	Illegal Samples	County Grown	Pesticide(s) Detected
Apricot	1	Fresno	Fludioxonil
Beet Tops	1	Ventura	Flonicamid, Fluxapyroxad
Bok Choy	1	Los Angeles	Lambda-Cyhalothrin
Cactus Pads	1	Los Angeles	Cypermethrin, Malathion
Cilantro (Fresh)	1	Ventura	Flutriafol
Collards	1	Stanislaus	Propamocarb
Grapes (All)	2	Yolo, Fresno	Acetamiprid, Cyantraniliprole
Kale	2	Monterey	Thiabendazole, Propyzamide
Kiwi Fruit	2	Butte, Fresno	Chlorantraniliprole, Methoxyfenozide, Thiabendazole
Lime (All)	1	San Diego	Simazine
Mustard Greens	1	Stanislaus	Linuron, Prometryn
Pomegranate	2	Fresno	Propiconazole, Azoxystrobin
Radish Tops	1	Ventura	Fluxapyroxad
Spinach	2	Kern, Monterey	Chlorothalonil, Bifenthrin, Chlorpyrifos
Spinach, Malabar	1	Riverside	Chlorthal-Dimethyl
Swiss Chard	4	Monterey, San Luis Obispo, Stanislaus	Chlorthal-Dimethyl, Captan
Tangerine (All)	3	Tulare	Acephate, Simazine

Organic Sample Results

As a part of its residue monitoring program, DPR also tests organic produce. Pesticide residues may be legally found on organic produce. The U.S. Department of Agriculture allows <u>certain pesticides</u> for use in organic farming. In addition, certified organic produce may have residues of other pesticides at less than 5% of the U.S. EPA tolerance for conventionally grown commodities (Code of Federal Regulations, Title 7, Part 205.671).

The CPRMP collects organic produce as encountered during routine sampling and shares these testing results with CDFA's CA State Organic Program which regulates organic operations in the state. All organic samples with detected pesticides are referred to CA State Organic Program for follow up investigation and potential enforcement. In cases where an organic sample has pesticide residue levels above the U.S. EPA tolerance for conventionally grown commodities, in addition to referral to CDFA, DPR will also follow-up and investigate the illegal sample.

In 2020, the CPRMP collected 173 organic samples. These samples represented 51 different commodities from eight different countries. Seventy-one percent of the organics tested (122), were of domestic origin; 29% of the samples (51) were imported. Of the 173 organic samples collected, 13 different pesticides were found on 25 samples (Table 4). Three samples: fresh cilantro from Arizona, grapes grown in California, and pineapple imported from Mexico, had illegal residues of a pesticide that did not have an established tolerance, or in the case of the grapes, was an over tolerance. More information about the State Organic Program is available at their website.

Table 4. Pesticides detected on organic commodities sampled in 2020; residues were above the 5% federal tolerance threshold for certified organic commodities.

Pesticide	Commodity	Number of Samples
Acetamiprid *	Grapes (All)	1
Bifenthrin	Cucumber	1
Cyprodinil	Cucumber	1
DDE	Kale	1
Difenoconazole	Peppers (Non-Chili)	1
Dimethomorph *	Cilantro (Fresh)	1
Famoxadone	Tomato	1
Fludioxonil	Cucumber	1
Fludioxonil	Nectarine	1
Fludioxonil	Peach	2
Fludioxonil	Plum	1
Permethrin *	Pineapple	1
Propyzamide	Lettuce, Leaf	1
Spinosad	Kale	1
Spinosad	Peppers (Non-Chili)	1
Spinosad	Raspberry	3
Spinosad	Swiss Chard	3
Spinosad	Tarragon	1
Sulfoxaflor	Cucumber	1
Thiamethoxam	Peppers (Non-Chili)	1

DPR Enforcement on Illegal Pesticide Residues

When illegal pesticide residues are detected, DPR quarantines the produce containing the illegal residues. The owner of the quarantined produce has the option to securely dispose of the produce on site, recondition the produce or dispose of it for byproducts purposes so long as

 st denote the pesticide residues that also exceeded the federal tolerance for the commodity and were considered illegal under the CPRMP

the byproducts can lawfully contain the pesticide residue found. Reconditioning can include, washing, peeling or simply waiting for the pesticide residue to breakdown to acceptable tolerance levels or be eliminated entirely if the illegal residue(s) has no established tolerance. After reconditioning, the owner must pay for the sample to be reanalyzed. If test results show the pesticide residue below the legal tolerance, DPR may allow the sale of the produce. If not, the produce cannot be sold and remains under quarantine.

DPR investigators trace the movement of the produce with illegal residues by contacting distributors, retailers, and wholesalers throughout California. DPR quarantines any additional remaining cases of produce found with illegal pesticide residues. During 2020, DPR issued 142 quarantine notices for over 70,000 pounds of produce carrying illegal pesticide residues.

DPR also provides compliance guidance to repeat offenders to reduce the flow of produce with illegal residues into California. DPR places companies in its Repeat Residue Offender Program (RRO) if they are identified more than once as the first point of sale in California of produce with illegal residues. Additionally, DPR may place a company in the RRO program when it identifies the company as the first point of sale of produce containing illegal residues that pose a potential acute health risk to consumers.

The RRO program includes a compliance assistance interview with the company. During these compliance assistance interviews, DPR staff review the illegal residue cases with company representatives and identify steps the company should take to prevent the future sale of produce with illegal pesticide residues. The company is given three months to implement the changes, after which the company is placed on probation for twelve months. Any company that is found to violate their probationary period is subject to enforcement actions. DPR has the authority to levy civil penalties against anyone who packs, ships, or sells produce with illegal pesticide residues. Information on penalty actions can be found on DPR has the DPR's Produce with Illegal Pesticide Residue Fines and Settlements webpage.

If it is determined that the produce with illegal pesticide residues was grown in California, the County Agricultural Commissioner (CAC) in the county where the produce was grown will investigate to determine the source of contamination. Frequently, DPR scientists assist CAC staff with this investigation. CACs have authority to levy civil penalties for illegal use of pesticides.

In 2020, the CPRMP referred the 27 illegal California grown samples to the CACs for investigation of potential illegal pesticide uses. The length of time between a commodity's harvest and retail sale can pose challenges to identifying the source field or orchard of the

pesticide residue. In two of the cases, the CACs were able to substantiate use violations. Kern CAC levied an \$850.00 fine against a grower for violations determined during their investigation of illegal chlorothalonil residues on spinach. San Luis Obispo CAC levied a \$1,650.00 fine against a grower for violations associated with residues on chard. For the remaining illegal cases, the CACs were unable to determine the source of the pesticide contamination.

All 2020 CPRMP produce sampling results, as well as previous years' data and reports, are available for download on DPR's Residue Monitoring Program website.

Appendix 1. 2020 CPRMP commodity samples containing illegal pesticide residues.

ORIGIN	PESTICIDE	COMMODITY	LABORATORY NUMBER	RESIDUE AMOUNT	TOLERANCE
CHILE	Chlorpropham	Kiwi Fruit	A20M00347	0.011	NTE
CHILE	Prochloraz	Peach	A20M00310	0.042	NTE
CHINA	Chlorpyrifos	Ginger Root	R20M00520	0.011	NTE
CHINA	Chlorpyrifos	Pear, Asian	R20M00521	0.1	0.05
CHINA	Fosthiazate	Ginger Root	R20M00087	0.022	NTE
CHINA	Fosthiazate	Ginger Root	R20M00470	0.025	NTE
CHINA	Fosthiazate	Ginger Root	R20M00711	0.011	NTE
CHINA	Phorate	Ginger Root	A20M01108	0.014	NTE
CHINA	Phorate Sulfone	Ginger Root	R20M00177	0.011	NTE
CHINA	Thiamethoxam	Ginger Root	R20M00470	0.029	0.02
CHINA	Thiamethoxam	Ginger Root	R20M00694	0.17	0.02
COSTA RICA	Cypermethrin	Culantro	R20M01261	0.49	0.05
COSTA RICA	Fipronil	Culantro	R20M01261	0.026	NTE
COSTA RICA	Indoxacarb	Culantro	R20M01261	0.012	NTE
COSTA RICA	Novaluron	Pineapple	R20M00208	0.016	NTE
COSTA RICA	Prochloraz	Pineapple	R20M00136	0.12	NTE
COSTA RICA	Prochloraz	Pineapple	R20M00197	0.12	NTE
COSTA RICA	Prochloraz	Pineapple	R20M00208	0.13	NTE
COSTA RICA	Pyraclostrobin	Taro	R20M01255	2.4	0.04
COSTA RICA	Thiacloprid	Chayote (Christophenes)	R20M01128	0.024	NTE
ECUADOR	Chlorpyrifos	Dragonfruit (Tropical Fruit)	A20M00464	0.023	NTE
ECUADOR	Dimethoate	Dragonfruit (Tropical Fruit)	R20M00604	0.016	NTE
ECUADOR	Flutriafol	Dragonfruit (Tropical Fruit)	A20M00464	0.039	NTE
ECUADOR	Prochloraz	Pineapple	A20M00130	0.026	NTE
ECUADOR	Tebuconazole	Dragonfruit (Tropical Fruit)	R20M00603	0.014	NTE

ORIGIN	PESTICIDE	COMMODITY	LABORATORY NUMBER	RESIDUE AMOUNT	TOLERANCE
ECUADOR	Tebuconazole	Dragonfruit (Tropical Fruit)	R20M01190	0.011	NTE
ECUADOR	Thiabendazole	Dragonfruit (Tropical Fruit)	A20M00153	0.28	NTE
ECUADOR	Thiabendazole	Dragonfruit (Tropical Fruit)	A20M00464	0.27	NTE
ECUADOR	Thiabendazole	Dragonfruit (Tropical Fruit)	R20M01190	0.5	NTE
GUATEMALA	Buprofezin	Banana	A20M00193	0.21	0.2
GUATEMALA	Carbendazim	Peas (All)	R20M01237	0.25	NTE
GUATEMALA	Difenoconazole	Pea, Snow	R20M01687	0.043	NTE
GUATEMALA	Tebuconazole	Pea, Snow	R20M00041	0.04	NTE
GUATEMALA	Tebuconazole	Pea, Snow	R20M00546	0.13	NTE
GUATEMALA	Tebuconazole	Peas (All)	R20M01237	0.038	NTE
MEXICO	Acephate	Beans (Green, String)	A20M01102	0.47	0.02
MEXICO	Acephate	Beans (Green, String)	A20M01155	0.23	0.02
MEXICO	Acephate	Cactus Pear	A20M00503	0.036	0.02
MEXICO	Acephate	Cactus Pear	R20M01188	0.046	0.02
MEXICO	Ametoctradin	Basil	R20M01192	6.2	NTE
MEXICO	Atrazine Desethyl	Cactus Pads	R20M01423	0.016	NTE
MEXICO	Azoxystrobin	Mangosteen (Tropical Fruit)	R20M00948	0.012	NTE
MEXICO	Bensulide	Radish Tops	R20M00329	0.011	NTE
MEXICO	Captan	Squash (Summer)	A20M01109	0.12	0.05
MEXICO	Carbendazim	Cactus Pads	A20M00226	0.08	NTE
MEXICO	Carbendazim	Cactus Pads	A20M00400	0.074	NTE
MEXICO	Carbendazim	Cactus Pads	R20M00307	0.011	NTE
MEXICO	Carbendazim	Garbanzos (Fresh)	R20M01604	0.23	NTE
MEXICO	Carbendazim	Guaje, (Legumes)	A20M00521	0.5	NTE
MEXICO	Carbendazim	Guaje, (Legumes)	R20M01537	0.076	NTE
MEXICO	Carbendazim	Peppers (Chili Type)	A20M01063	0.044	NTE
MEXICO	Carbendazim	Peppers (Chili Type)	A20M01158	0.017	NTE

ORIGIN	PESTICIDE	COMMODITY	LABORATORY NUMBER	RESIDUE AMOUNT	TOLERANCE
MEXICO	Carbendazim	Pineapple	A20M00902	0.012	NTE
MEXICO	Carbendazim	Spinach	A20M00198	0.14	NTE
MEXICO	Carbofuran	Cactus Pads	A20M00226	0.025	NTE
MEXICO	Carbofuran	Guaje, (Legumes)	R20M01537	0.084	NTE
MEXICO	Carbofuran	Purslane, Garden	R20M00965	0.029	NTE
MEXICO	Carbofuran	Tomatillo	A20M00349	0.022	NTE
MEXICO	Chlorothalonil	Bok Choy	A20M00106	0.077	NTE
MEXICO	Chlorpyrifos	Cactus Pads	A20M00187	0.014	NTE
MEXICO	Chlorpyrifos	Cactus Pads	A20M00321	0.075	NTE
MEXICO	Chlorpyrifos	Cactus Pads	A20M00806	0.022	NTE
MEXICO	Chlorpyrifos	Cactus Pads	R20M00307	0.16	NTE
MEXICO	Chlorpyrifos	Cactus Pads	R20M01423	0.021	NTE
MEXICO	Chlorpyrifos	Cactus Pear	A20M00503	0.035	NTE
MEXICO	Chlorpyrifos	Cactus Pear	A20M01015	0.011	NTE
MEXICO	Chlorpyrifos	Tomatillo	A20M00061	0.015	NTE
MEXICO	Clofentezine	Peppers (Chili Type)	R20M01178	0.025	NTE
MEXICO	Cyfluthrin	Guaje, (Legumes)	A20M00521	0.058	NTE
MEXICO	Cypermethrin	Basil	R20M01192	1.3	0.05
MEXICO	Cypermethrin	Guaje, (Legumes)	A20M00398	1	0.5
MEXICO	Cypermethrin	Guaje, (Legumes)	A20M00521	0.2	0.05
MEXICO	Diazinon	Cactus Pads	R20M00307	0.021	NTE
MEXICO	Dimethoate	Cactus Pads	A20M00187	0.21	NTE
MEXICO	Dimethoate	Cactus Pads	A20M00226	0.14	NTE
MEXICO	Dimethoate	Cactus Pads	A20M00322	0.025	NTE
MEXICO	Dimethoate	Cactus Pads	R20M01561	0.2	NTE
MEXICO	Dimethoate	Cactus Pear	A20M00503	0.015	NTE
MEXICO	Dimethoate	Chayote (Christophenes)	A20M00579	0.022	NTE
MEXICO	Dimethoate	Chayote (Christophenes)	R20M00428	0.074	NTE

ORIGIN	PESTICIDE	COMMODITY	LABORATORY NUMBER	RESIDUE AMOUNT	TOLERANCE
MEXICO	Dimethoate	Guaje, (Legumes)	A20M00398	5.4	NTE
MEXICO	Dimethoate	Guaje, (Legumes)	A20M00521	0.49	NTE
MEXICO	Dimethoate	Guava (Tropical Fruit)	R20M01031	0.011	NTE
MEXICO	Dimethomorph	Basil	R20M01192	3	NTE
MEXICO	Dimethomorph	Mint	A20M00837	0.014	NTE
MEXICO	Fenpropathrin	Guaje, (Legumes)	A20M00398	0.023	NTE
MEXICO	Fipronil	Peppers (Chili Type)	R20M00275	0.017	NTE
MEXICO	Fipronil	Peppers (Chili Type)	R20M00340	0.013	NTE
MEXICO	Fipronil	Peppers (Chili Type)	R20M00455	0.013	NTE
MEXICO	Fipronil	Peppers (Chili Type)	R20M00469	0.026	NTE
MEXICO	Fipronil	Peppers (Chili Type)	R20M00558	0.018	NTE
MEXICO	Fipronil	Peppers (Chili Type)	R20M01606	0.029	NTE
MEXICO	Flonicamid	Tomato	R20M00820	0.41	0.4
MEXICO	Flupyradifurone	Basil	R20M01192	0.011	NTE
MEXICO	Imidacloprid	Guaje, (Legumes)	A20M00521	0.14	NTE
MEXICO	Imidacloprid	Mint	A20M00837	0.03	NTE
MEXICO	Iprodione	Basil	R20M01192	0.44	NTE
MEXICO	Iprodione	Onions (Green)	A20M00737	0.22	NTE
MEXICO	Iprodione	Squash (Summer)	A20M00942	0.031	NTE
MEXICO	Lambda-Cyhalothrin	Cactus Pear	A20M00231	0.012	0.01
MEXICO	Lambda-Cyhalothrin	Orange (All)	A20M00933	0.015	0.01
MEXICO	Malathion	Cactus Pads	A20M00187	0.072	NTE
MEXICO	Malathion	Cactus Pads	A20M00226	0.065	NTE
MEXICO	Methamidophos	Asparagus	R20M00620	0.022	NTE
MEXICO	Methamidophos	Beans (Green, String)	A20M01102	0.21	NTE
MEXICO	Methamidophos	Beans (Green, String)	A20M01155	0.11	NTE
MEXICO	Methamidophos	Blackberry	A20M00565	0.45	NTE
MEXICO	Methamidophos	Chayote (Christophenes)	A20M00228	0.058	NTE

ORIGIN	PESTICIDE	COMMODITY	LABORATORY NUMBER	RESIDUE AMOUNT	TOLERANCE
MEXICO	Methamidophos	Chayote (Christophenes)	A20M00422	0.021	NTE
MEXICO	Methamidophos	Chayote (Christophenes)	A20M00989	0.012	NTE
MEXICO	Methamidophos	Chayote (Christophenes)	R20M00611	0.13	NTE
MEXICO	Methamidophos	Chayote (Christophenes)	R20M01188	0.012	NTE
MEXICO	Methamidophos	Guaje, (Legumes)	R20M01537	0.082	NTE
MEXICO	Methamidophos	Onions (Green)	A20M00691	0.088	NTE
MEXICO	Methamidophos	Peas (All)	A20M00227	0.034	NTE
MEXICO	Methamidophos	Tomatillo	R20M01328	0.033	NTE
MEXICO	Methomyl	Cactus Pads	A20M00187	0.047	NTE
MEXICO	Methomyl	Cactus Pads	A20M00226	0.012	NTE
MEXICO	Methomyl	Cactus Pads	A20M00322	0.065	NTE
MEXICO	Methomyl	Cactus Pads	R20M00307	0.3	NTE
MEXICO	Methomyl	Cactus Pear	A20M00503	0.011	NTE
MEXICO	Monocrotophos	Cactus Pads	A20M00187	0.052	NTE
MEXICO	Monocrotophos	Cactus Pads	A20M00226	0.15	NTE
MEXICO	Monocrotophos	Cactus Pads	R20M00307	0.61	NTE
MEXICO	Monocrotophos	Cactus Pads	R20M01637	0.025	NTE
MEXICO	Monocrotophos	Cactus Pear	A20M00503	0.058	NTE
MEXICO	Monocrotophos	Cactus Pear	R20M01137	0.016	NTE
MEXICO	Monocrotophos	Peppers (Chili Type)	A20M00888	0.028	NTE
MEXICO	Monocrotophos	Tomatillo	R20M01328	0.021	NTE
MEXICO	Myclobutanil	Onions (Green)	A20M00737	0.018	NTE
MEXICO	PCNB	Bitter Melon	A20M00441	0.01	NTE
MEXICO	Permethrin	Banana	A20M00862	0.15	NTE
MEXICO	Permethrin	Cactus Pear	A20M00520	0.25	NTE
MEXICO	Permethrin	Cactus Pear	R20M00972	0.013	NTE
MEXICO	Permethrin	Garbanzos (Fresh)	R20M01604	0.24	NTE
MEXICO	Permethrin	Kale	A20M00547	0.55	NTE

ORIGIN	PESTICIDE	COMMODITY	LABORATORY NUMBER	RESIDUE AMOUNT	TOLERANCE
MEXICO	Permethrin	Peppers (Chili Type)	A20M00317	0.02	NTE
MEXICO	Permethrin	Pineapple	A20M00438	0.015	NTE
MEXICO	Phosmet	Peppers (Chili Type)	A20M01063	0.013	NTE
MEXICO	Prometryn	Gai Lon	R20M00212	0.023	NTE
MEXICO	Propamocarb	Onions (Green)	A20M00691	0.5	NTE
MEXICO	Pyridalyl	Bok Choy	A20M00856	0.92	NTE
MEXICO	Pyridalyl	Bok Choy	A20M00898	0.6	NTE
MEXICO	Pyridalyl	Mint	A20M00837	3.6	NTE
MEXICO	Pyrimethanil	Peppers (Chili Type)	R20M00858	0.01	NTE
MEXICO	Spirotetramat	Blackberry	A20M00275	0.062	NTE
MEXICO	Sulfoxaflor	Peas (All)	R20M00107	0.018	NTE
MEXICO	Tebuconazole	Papaya	A20M00789	0.015	NTE
MEXICO	Thiamethoxam	Peppers (Chili Type)	A20M00234	0.97	0.25
MEXICO	Thidiazuron	Blackberry	A20M00275	0.013	NTE
MEXICO	Thiophanate-Methyl	Cactus Pear	R20M00972	0.036	NTE
MEXICO	Thiophanate-Methyl	Papaya	R20M00970	0.074	NTE
MEXICO	Trifloxystrobin	Papaya	R20M01539	0.94	0.7
PERU	Carbendazim	Ginger Root	R20M00164	1.3	NTE
PERU	Carbendazim	Pea, Snow	R20M01429	0.029	NTE
PERU	Carbendazim	Peas (All)	R20M01430	1.9	NTE
PERU	Cyprodinil	Peas (All)	A20M00832	0.016	NTE
PERU	Cyprodinil	Peas (All)	R20M01430	0.15	NTE
PERU	Fludioxonil	Peas (All)	A20M00832	0.018	0.01
PERU	Fludioxonil	Pea, Snow	R20M01429	0.012	0.01
PERU	Fludioxonil	Peas (All)	R20M01430	0.25	0.01
PERU	Imidacloprid	Asparagus	A20M00079	0.015	NTE
PERU	Pyrimethanil	Peas (All)	R20M01430	0.011	NTE
PERU	Tebuconazole	Pea, Snow	A20M00827	0.016	NTE

ORIGIN	PESTICIDE	COMMODITY	LABORATORY NUMBER	RESIDUE AMOUNT	TOLERANCE
THAILAND	Azoxystrobin	Durian (Tropical Fruit)	R20M01287	0.026	NTE
THAILAND	Prochloraz	Durian (Tropical Fruit)	R20M01287	0.028	NTE
US, ARIZONA	Chlorthal-Dimethyl	Spinach	R20M00089	0.014	NTE
US, ARIZONA	Chlorthal-Dimethyl	Swiss Chard	R20M01689	0.026	NTE
US, ARIZONA	Dimethomorph	Cilantro (Fresh)	R20M00288	0.034	NTE
US, CALIFORNIA	Acephate	Tangerine (All)	A20M00096	0.063	0.02
US, CALIFORNIA	Acephate	Tangerine (All)	R20M00135	0.094	0.02
US, CALIFORNIA	Acetamiprid	Grapes (All)	R20M00960	0.96	0.35
US, CALIFORNIA	Azoxystrobin	Pomegranate	R20M01374	0.04	NTE
US, CALIFORNIA	Bifenthrin	Spinach	A20M00473	0.3	0.2
US, CALIFORNIA	Captan	Swiss Chard	R20M01186	3.5	0.05
US, CALIFORNIA	Chlorantraniliprole	Kiwi Fruit	A20M00039	0.045	NTE
US, CALIFORNIA	Chlorothalonil	Spinach	A20M00002	2.99	NTE
US, CALIFORNIA	Chlorpyrifos	Spinach	A20M00473	0.013	NTE
US, CALIFORNIA	Chlorthal-Dimethyl	Spinach	A20M00002	0.021	NTE
US, CALIFORNIA	Chlorthal-Dimethyl	Spinach (Malabar)	A20M00093	0.109	NTE
US, CALIFORNIA	Chlorthal-Dimethyl	Swiss Chard	A20M01119	0.012	NTE
US, CALIFORNIA	Chlorthal-Dimethyl	Swiss Chard	R20M00907	0.012	NTE
US, CALIFORNIA	Chlorthal-Dimethyl	Swiss Chard	R20M01540	0.014	NTE
US, CALIFORNIA	Cyantraniliprole	Grapes (All)	R20M01288	0.034	NTE
US, CALIFORNIA	Cypermethrin	Cactus Pads	A20M00860	0.052	0.05
US, CALIFORNIA	Flonicamid	Beet Tops, (Leafy Vegetable)	A20M00703	0.096	NTE
US, CALIFORNIA	Fludioxonil	Apricot	R20M00535	6.9	5
US, CALIFORNIA	Flutriafol	Cilantro (Fresh)	R20M00938	0.028	NTE
US, CALIFORNIA	Fluxapyroxad	Beet Tops, (Leafy Vegetable)	A20M00703	0.036	NTE
US, CALIFORNIA	Fluxapyroxad	Radish Tops	A20M00392	0.011	NTE

ORIGIN	PESTICIDE	COMMODITY	LABORATORY NUMBER	RESIDUE AMOUNT	TOLERANCE
US, CALIFORNIA	Lambda-Cyhalothrin	Bok Choy	A20M00895	0.11	0.01
US, CALIFORNIA	Linuron	Mustard Greens	R20M00237	0.014	NTE
US, CALIFORNIA	Malathion	Cactus Pads	A20M00860	0.044	NTE
US, CALIFORNIA	Methoxyfenozide	Kiwi Fruit	A20M00039	0.02	NTE
US, CALIFORNIA	Prometryn	Mustard Greens	R20M00237	0.01	NTE
US, CALIFORNIA	Propamocarb	Collards	R20M00313	0.015	NTE
US, CALIFORNIA	Propiconazole	Pomegranate	A20M00816	0.012	NTE
US, CALIFORNIA	Propyzamide	Kale	R20M00827	0.025	NTE
US, CALIFORNIA	Simazine	Lime (All)	R20M00494	0.012	NTE
US, CALIFORNIA	Simazine	Tangerine (All)	R20M00424	0.019	NTE
US, CALIFORNIA	Thiabendazole	Kale	A20M00879	0.011	NTE
US, CALIFORNIA	Thiabendazole	Kiwi Fruit	A20M00929	0.011	NTE
US, FLORIDA	Bifenthrin	Dragonfruit (Tropical Fruit)	R20M01258	0.023	NTE
US, FLORIDA	Methomyl	Guava (Tropical Fruit)	R20M01567	0.025	NTE
US, TEXAS	Lambda-Cyhalothrin	Bok Choy	R20M00314	0.041	0.01
VIETNAM	Acetamiprid	Longan (Tropical Fruit)	A20M00470	0.057	0.01
VIETNAM	Acetamiprid	Longan (Tropical Fruit)	R20M00014	0.05	0.01
VIETNAM	Acetamiprid	Longan (Tropical Fruit)	R20M00214	0.014	NTE
VIETNAM	Acetamiprid	Longan (Tropical Fruit)	R20M00525	0.58	0.01
VIETNAM	Carbendazim	Dragonfruit (Tropical Fruit)	A20M00566	0.082	NTE
VIETNAM	Carbendazim	Longan (Tropical Fruit)	R20M00214	0.022	NTE
VIETNAM	Carbendazim	Longan (Tropical Fruit)	R20M00525	0.22	NTE
VIETNAM	Chlorfenapyr	Longan (Tropical Fruit)	R20M00525	0.012	0.01
VIETNAM	Chlorpyrifos	Longan (Tropical Fruit)	A20M00470	0.015	NTE
VIETNAM	Chlorpyrifos	Longan (Tropical Fruit)	R20M00214	0.016	NTE
VIETNAM	Cypermethrin	Longan (Tropical Fruit)	R20M00214	0.051	0.05
VIETNAM	Cypermethrin	Longan (Tropical Fruit)	R20M00525	0.24	0.05
VIETNAM	Difenoconazole	Longan (Tropical Fruit)	A20M00470	0.043	NTE

ORIGIN	PESTICIDE	COMMODITY	LABORATORY NUMBER	RESIDUE AMOUNT	TOLERANCE
VIETNAM	Difenoconazole	Longan (Tropical Fruit)	R20M00014	0.089	NTE
VIETNAM	Difenoconazole	Longan (Tropical Fruit)	R20M00214	0.22	NTE
VIETNAM	Difenoconazole	Longan (Tropical Fruit)	R20M00525	0.074	NTE
VIETNAM	Dimethomorph	Longan (Tropical Fruit)	R20M00214	0.011	NTE
VIETNAM	Fipronil	Longan (Tropical Fruit)	A20M00470	0.045	NTE
VIETNAM	Fipronil	Longan (Tropical Fruit)	R20M00214	0.03	NTE
VIETNAM	Forchlorfenuron	Dragonfruit (Tropical Fruit)	R20M00518	0.027	NTE
VIETNAM	Hexaconazole	Longan (Tropical Fruit)	A20M00470	0.063	NTE
VIETNAM	Hexaconazole	Longan (Tropical Fruit)	R20M00214	0.013	NTE
VIETNAM	Hexaconazole	Longan (Tropical Fruit)	R20M00525	0.032	NTE
VIETNAM	Iprodione	Dragonfruit (Tropical Fruit)	A20M00566	0.015	NTE
VIETNAM	Iprodione	Dragonfruit (Tropical Fruit)	R20M00423	0.26	NTE
VIETNAM	Pyraclostrobin	Longan (Tropical Fruit)	A20M00470	0.067	NTE
VIETNAM	Thiamethoxam	Longan (Tropical Fruit)	A20M00470	0.026	0.02
VIETNAM	Tricyclazole	Longan (Tropical Fruit)	A20M00470	0.24	NTE
VIETNAM	Trifloxystrobin	Longan (Tropical Fruit)	A20M00470	0.068	NTE

Appendix 2. 2020 CPRMP sample test results by commodity type, number of samples collected, and number with illegal pesticide residues.

Commodity	Total Number	Number Illegal
Aloe Vera	3	0
Apple	57	0
Apricot	40	1
Artichoke (Globe)	10	0
Asparagus	53	2
Avocado	37	0
Banana	25	2
Basil	1	1
Bean, Broad	1	0
Beans (Green, String)	55	1
Beans (Snap)	3	0
Beets Tops	2	1
Beets, (Root)	7	0
Bitter Melon	28	1
Blackberry	35	2
Blueberry	28	0
Bok Choy	24	5
Broccoli	62	0
Brussels Sprouts	12	0
Cabbage	15	0
Cactus Pads	21	11
Cactus Pear	9	6
Cantaloupe	21	0
Carambola	1	0
Carrots (Root Crop)	38	0
Cassia	1	0
Cauliflower	43	0
Celery	64	0
Chayote (Fruit)	84	8
Cherry	18	0
Chinese Cabbage	5	0
Chinese Okra	1	0
Chinese Radish/Daikon	7	0
Cilantro (Fresh)	6	2
Citron (Citrus)	1	0
Coconut	2	0
Collards	5	1

Commodity	Total Number	Number Illegal
Corn, Sweet	11	0
Cranberry	4	0
Cucumber (All)	54	0
Culantro	1	1
Currant	1	0
Dandelion	1	0
Date	2	0
Dragonfruit	13	9
Durian	1	1
Eggplant	29	0
Endive (Escarole)	1	0
Fennel (Sweet Or Florence)	2	0
Fig	12	0
Gai Choy	3	0
Gai Lon	4	1
Garbanzos (Fresh)	2	1
Garlic	11	0
Ginger Root	23	8
Grape Leaves	1	0
Grapefruit	38	0
Grapes (All)	100	2
Groundcherry	1	0
Guaje (Legume)	3	3
Guava	11	2
Guava, Pineapple (Feijoa)	6	0
Honeydew Melon	2	0
Horseradish (Root)	3	0
Jicama	8	0
Kale	36	3
Kiwi Fruit	93	3
Kohlrabi	1	0
Leek	1	0
Lemon	49	0
Lemongrass	1	0
Lettuce, Head (All)	13	0
Lettuce, Leaf (All)	48	0
Lime (All)	36	1
Longan	5	4
Lotus Root	1	0
Lychee	2	0

Commodity	Total Number	Number Illegal
Mamey	1	0
Mango	46	0
Mangosteen	1	1
Manioc (Cassava)	6	0
Melons (All)	4	0
Mint	1	1
Mushrooms	20	0
Muskmelon	6	0
Mustard Greens	40	1
Nectarine	42	0
Okra	5	0
Onion (Dry Bulb)	19	0
Onions (Green)	17	2
Orange (All)	1	1
Papaya	54	3
Pea, Snow	10	5
Peach	66	1
Pear	23	0
Pear, Asian	23	1
Peas (All)	12	5
Peppers (Chili Type)	103	13
Peppers (Non-Chili Type)	101	0
Persimmon	8	0
Pineapple	49	7
Plantain	6	0
Plum	57	0
Pluot	6	0
Pomegranate	2	2
Pomelo	1	0
Potatoes (All)	26	0
Purslane, Garden	1	1
Quince	3	0
Radicchio	2	0
Radish	20	0
Radish Tops	11	2
Rambutan	1	0
Raspberry	27	0
Rhubarb	1	0
Rutabaga	1	0
Spinach	63	4

Commodity	Total Number	Number Illegal
Spinach, Malabar	1	1
Squash (Summer)	48	2
Squash (Winter)	14	0
Strawberry	86	0
Sweet Potato	21	0
Swiss Chard	24	5
Tangelo	3	0
Tangerine (All)	167	3
Taro	6	1
Tarragon	1	0
Tejocote	1	0
Tomatillo	92	3
Tomato	71	1
Turmeric	3	0
Turnip Greens	1	0
Turnips (Roots)	1	0
Water Chestnut	1	0
Watermelons	5	0
Yautia (Root Crop)	1	0

Appendix 3. Commodities sampled with illegal pesticide residues by origin in 2020.

Commodities With Illegal Residues	Number Of Illegal Samples	Number Of Samples	Percent Illegal	State Or Country Of Origin
Apricot	1	40	3%	US, California
Asparagus	2	53	4%	Mexico, Peru
Banana	2	25	8%	Guatemala, Mexico
Basil	1	1	100%	Mexico
Beans (Green, String)	1	55	2%	Mexico
Beet Tops	1	2	50%	US, California
Bitter Melon	1	28	4%	Mexico
Blackberry	2	35	6%	Mexico
Bok Choy	5	24	21%	Mexico; US, California; US, Texas
Cactus Pads	11	21	52%	Mexico; US, California
Cactus Pear	6	9	67%	Mexico
Chayote (Fruit)	8	84	10%	Costa Rica, Mexico
Cilantro (Fresh)	2	6	33%	US, California; US, Arizona
Collards	1	5	20%	US, California
Culantro	1	1	100%	Costa Rica
Dragonfruit	9	13	69%	Ecuador, Vietnam; US, Florida
Durian	1	1	100%	Thailand
Gai Lon	1	4	25%	Mexico
Garbanzos (Fresh)	1	2	50%	Mexico
Ginger Root	8	23	35%	China, Peru
Grapes	2	100	2%	US, California
Guaje, (Legumes)	3	3	100%	Mexico
Guava	2	11	18%	Mexico; US, Florida
Kale	3	36	8%	Mexico; US, California
Kiwi Fruit	3	93	3%	Chile; US, California
Lime	1	36	3%	US, California
Longan	4	5	80%	Vietnam
Mangosteen	1	1	100%	Mexico
Mint	1	1	100%	Mexico
Mustard Greens	1	40	3%	US, California
Onions (Green)	2	17	12%	Mexico
Orange (All)	1	1	100%	Mexico
Papaya	3	54	6%	Mexico
Pea, Snow	5	10	50%	Peru
Peach	1	66	2%	Chile
Pear, Asian	1	23	4%	China

Commodities With Illegal Residues	Number Of Illegal Samples	Number Of Samples	Percent Illegal	State Or Country Of Origin
Peas (All)	5	12	42%	Guatemala, Mexico, Peru
Peppers (Chili)	13	103	13%	Mexico
Pineapple	7	49	14%	Costa Rica, Ecuador, Mexico
Pomegranate	2	2	100%	US, California
Purslane, Garden	1	1	100%	Mexico
Radish Tops	2	11	18%	Mexico; US, California
Spinach	5	64	8%	Mexico; US, Arizona
Spinach, Malabar	1	1	100%	US, California
Squash (Summer)	2	48	4%	Mexico
Swiss Chard	5	24	21%	US, Arizona; US, California
Tangerine	3	167	2%	US, California
Taro	1	6	17%	Costa Rica
Tomatillo	3	92	3%	Mexico
Tomato	1	71	1%	Mexico

Appendix 4. Origins of Illegal Pesticide Residues Detected In 2020.

State Or Country	Pesticide	Detections
Chile	Chlorpropham	1
Chile	Prochloraz	1
China	Chlorpyrifos	2
China	Fosthiazate	3
China	Phorate	1
China	Phorate Sulfone	1
China	Thiamethoxam	2
Costa Rica	Cypermethrin	1
Costa Rica	Fipronil	1
Costa Rica	Indoxacarb	1
Costa Rica	Novaluron	1
Costa Rica	Prochloraz	3
Costa Rica	Pyraclostrobin	1
Costa Rica	Thiacloprid	1
Ecuador	Chlorpyrifos	1
Ecuador	Dimethoate	1
Ecuador	Flutriafol	1
Ecuador	Prochloraz	1
Ecuador	Tebuconazole	2
Ecuador	Thiabendazole	3
Guatemala	Buprofezin	1
Guatemala	Carbendazim	1
Guatemala	Difenoconazole	1
Guatemala	Tebuconazole	3
Mexico	Acephate	4
Mexico	Ametoctradin	1
Mexico	Atrazine Desethyl	1
Mexico	Azoxystrobin	1
Mexico	Bensulide	1
Mexico	Captan	1
Mexico	Carbendazim	10
Mexico	Carbofuran	4
Mexico	Chlorothalonil	1
Mexico	Chlorpyrifos	8
Mexico	Clofentezine	1
Mexico	Cyfluthrin	1
Mexico	Cypermethrin	3
Mexico	Diazinon	1
Mexico	Dimethoate	10

State Or Country	Pesticide	Detections
Mexico	Dimethomorph	2
Mexico	Fenpropathrin	1
Mexico	Fipronil	6
Mexico	Flonicamid	1
Mexico	Flupyradifurone	1
Mexico	Imidacloprid	2
Mexico	Iprodione	3
Mexico	Lambda-Cyhalothrin	2
Mexico	Malathion	2
Mexico	Methamidophos	13
Mexico	Methomyl	5
Mexico	Monocrotophos	8
Mexico	Myclobutanil	1
Mexico	PCNB	1
Mexico	Permethrin	7
Mexico	Phosmet	1
Mexico	Prometryn	1
Mexico	Propamocarb	1
Mexico	Pyridalyl	3
Mexico	Pyrimethanil	1
Mexico	Spirotetramat	1
Mexico	Sulfoxaflor	1
Mexico	Tebuconazole	1
Mexico	Thiamethoxam	1
Mexico	Thidiazuron	1
Mexico	Thiophanate-Methyl	2
Mexico	Trifloxystrobin	1
Peru	Carbendazim	3
Peru	Cyprodinil	2
Peru	Fludioxonil	3
Peru	Imidacloprid	1
Peru	Pyrimethanil	1
Peru	Tebuconazole	1
Thailand	Azoxystrobin	1
Thailand	Prochloraz	1
US, Arizona	Chlorthal-Dimethyl	2
US, Arizona	Dimethomorph	1
US, California	Acephate	2
US, California	Acetamiprid	1
US, California	Azoxystrobin	1

State Or Country	Pesticide	Detections
US, California	Bifenthrin	1
US, California	Captan	1
US, California	Chlorantraniliprole	1
US, California	Chlorothalonil	1
US, California	Chlorpyrifos	1
US, California	Chlorthal-Dimethyl	5
US, California	Cyantraniliprole	1
US, California	Cypermethrin	1
US, California	Flonicamid	1
US, California	Fludioxonil	1
US, California	Flutriafol	1
US, California	Fluxapyroxad	2
US, California	Lambda-Cyhalothrin	1
US, California	Linuron	1
US, California	Malathion	1
US, California	Methoxyfenozide	1
US, California	Prometryn	1
US, California	Propamocarb	1
US, California	Propiconazole	1
US, California	Propyzamide	1
US, California	Simazine	2
US, California	Thiabendazole	2
US, Florida	Bifenthrin	1
US, Florida	Methomyl	1
US, Texas	Lambda-Cyhalothrin	1
Vietnam	Acetamiprid	4
Vietnam	Carbendazim	3
Vietnam	Chlorfenapyr	1
Vietnam	Chlorpyrifos	2
Vietnam	Cypermethrin	2
Vietnam	Difenoconazole	4
Vietnam	Dimethomorph	1
Vietnam	Fipronil	2
Vietnam	Forchlorfenuron	1
Vietnam	Hexaconazole	3
Vietnam	Iprodione	2
Vietnam	Pyraclostrobin	1
Vietnam	Thiamethoxam	1
Vietnam	Tricyclazole	1
Vietnam	Trifloxystrobin	1