

Pesticide Use Regulations on **CONVENTIONAL** Fruit and Vegetable Farms

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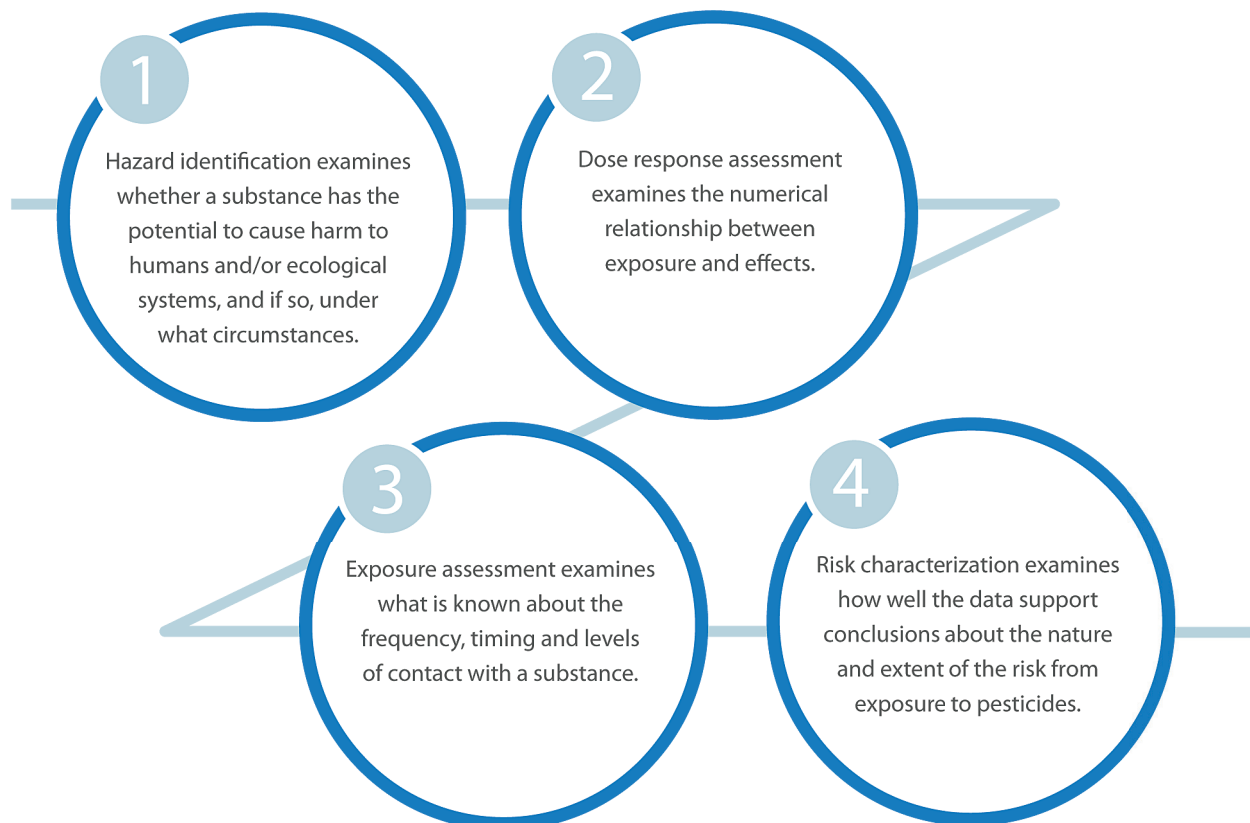


The U.S. Environmental Protection Agency (U.S. EPA) follows a rigorous scientific evaluation process to register pesticides for use in agriculture production to ensure they will not harm human health, non-target species or the environment when used according to label instructions. These evaluations consider protection of infants and children as well as adults from the potential harmful effects of pesticide exposure.

U.S. EPA also reevaluates older pesticides already on the market. If an evaluation raises concern, U.S. EPA can strengthen the conditions for a pesticide's use or cancel its registration.

U.S. EPA's authority to register pesticides falls under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) initially passed by Congress in 1947. Pesticides must be registered by U.S. EPA before they can be manufactured, distributed or sold unless they meet the criteria for a minimum-risk pesticide, a special class of pesticides not subject to federal registration requirements because their ingredients are considered safe if used according to label directions. (http://www.epa.gov/oppbppd1/biopesticides/regtools/25b_list.htm). The Pesticides Registration Manual, also known as the Blue Book, details the process for registering all pesticides. (<http://www.epa.gov/pesticides/bluebook/>.)

U.S. EPA evaluates a pesticide's potential for health effects using the National Research Council's four-step process for Human Health Risk Assessments:



A description of U.S. EPA's risk assessment process is posted at: http://www.epa.gov/pesticides/about/overview_risk_assess.htm.

Pesticides must be applied in compliance with federal laws, and state laws and regulations that can differ from state to state. California, for example, has the most comprehensive program in the nation to regulate pesticide use.

In California, for example, before farmers can apply most pesticides, they must comply with more than 70 state laws in addition to federal laws and regulations governing their use.

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This includes requirements for permits for pesticides designated as restricted materials, requirements related to worker safety, transportation, storage and disposal, requirements to protect bees and ground water, and use restrictions to limit emissions to protect public health.

Under the Federal Food, Drug and Cosmetic Act, if a pesticide use may result in residues in a food or animal feed product, a tolerance or an exemption from the requirement of a tolerance must be set by U.S. EPA based on a finding of reasonable certainty of no harm from the use. A tolerance is a maximum allowable limit.

Inspectors from the U.S. Department of Agriculture (USDA), Food and Drug Administration (FDA) and state programs conduct sampling and monitoring programs to ensure that tolerance limits are not exceeded. FDA's Pesticide Monitoring Program has for decades shown that more than 50 percent of samples from market basket testing have no detectable levels of pesticides. The vast majority of detected residues are below U.S. EPA's established tolerance levels. More information about tolerances is posted at: <http://www.epa.gov/pesticides/food/viewtols.htm>.

Pest Management Options

Biologically based pesticides, such as pheromones and biopesticides, are becoming increasingly popular with conventional growers and are also used by organic farmers (<http://www.epa.gov/pesticides/biopesticides/whatare-biopesticides.htm>). In addition, U.S. EPA is registering reduced-risk conventional pesticides (<http://www.epa.gov/opprd001/workplan/reducedrisk.html>) in increasing numbers.

U.S. EPA and many states promote the use of Integrated Pest Management (IPM), a strategy that emphasizes natural control, pest prevention, use of pesticides as a last resort and using pesticides that are less toxic to people and the environment. IPM practices include crop inspection and monitoring for damage before applying pesticides.

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For example, a farmer may initially use biopesticides or mechanical controls such as trapping or weeding. If these less risky controls are not effective, the farmer would apply selective and targeted spraying of pesticides and additional pest control methods. More information about IPM is posted at: <http://www.epa.gov/pesticides/controlling/agriculture.htm>.

Most importantly, these farmers and their families live and work in the communities where they farm, so protecting the land and the environment is a priority. These farmers also feed their families what they grow. As one third

generation farmer recently stated, “I actually answer to a higher authority than the regulatory community, and that’s my family who are the first to eat what I grow.”

Imports

Food imported into the United States is subject to a variety of federal laws and administered by a number of different federal agencies. The FDA’s and USDA’s sampling program to ensure pesticide residues are within established tolerances includes both domestically grown and imported fresh produce.

A food safety organization under the United Nations and the World Health Organization, known as Codex, plays a key role. Codex develops international food safety and quality standards, including Maximum Residue Limits (MRLs), for pesticides to protect the health of consumers and ensure fair practices in the food trade. U.S. EPA participates actively in Codex and contributes technical expertise to the development of these international standards and guidelines. A database of MRLs, or tolerances, for U.S. specialty crops is supported by USDA. This database can be searched by crop or pesticide, for the United States or for 90 foreign countries. (<http://www.fas.usda.gov/htp/mrl.asp>)





Q and A with Brian R. Leahy, who was appointed director of the California Department of Pesticide Regulation (CDPR) in February 2012 by Gov. Edmund G. Brown Jr.

Q: In 1980, you took over the operations of a 900-acre rice farm in Northern California that converted to organic farming practices. You also managed an 800-acre organic corn, soybean, alfalfa, and cattle farm in Nebraska in the early 1990s and served as executive director of the California Certified Organic Farmers from 2000 to 2004. As a pioneer in organic farming practices, why did you want to be the head of CDPR?

A: I wanted to head CDPR for the same reason I became an organic farmer: to change society's relationship with chemistry and reduce the risk from pesticides. Overall, my focus is change – and how to bring it about. I want to show people that you can effectively manage pests by using pesticides as a last resort and choosing ones that are less toxic to people. And I want to transition away from older, more toxic pesticides and help accelerate the development of more benign products and practices to control pests. At the same time, we have to ensure that if farmers choose to use pesticides, they do so in a manner that is protective of people and the environment. I also believe that, having farmed and having a good understanding of agriculture and resource management, I can see what progress is possible, what the barriers to change are and why pesticides will always be part of modern life.

Q: What is your biggest challenge as a pesticide regulator?

A: With nearly 38 million people, California is both the most populated state as well as the most productive agricultural state in the nation. California produces more than 50 percent of the nation's fruit, nut and vegetable crops. Pest control is vital to maintain our vibrant agricultural industry.

The greatest challenge to agriculture in California is the urban and agricultural conflict. People are living closer to farms and urban neighbors are far less willing to accept farming practices that were once considered necessary. Pesticide application or fumigation are examples of this. The public expects new pesticides to be more benign and they expect us to protect public health and the environment.

In addition, at CDPR we recognize that the non-professional user of pesticides (such as homeowners, unlicensed landscapers and janitors) can cause unnecessary damage to human health and the environment.

California has the nation's most comprehensive program to regulate pesticide use. CDPR staff includes medical doctors, toxicologists and environmental scientists with expertise in pesticides. Our job is to enforce restrictions intended to ensure the proper and safe use of pesticides. We develop comprehensive safety measures, unique to California, to protect neighboring communities and sensitive sites like schools that are located in agricultural areas.



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Q: Are pesticides necessary?

A: Pesticides are an important tool to grow food and to protect public health and the environment. Our modern food supply, public health and resource management all rely on pesticides.

CDPR aims to protect human health and the environment as pesticides are used and to foster reduced-risk pest management through research, grants and recognition. We encourage the use of pesticides as a last resort and the use of pesticides that are less toxic to people. This strategy, known as Integrated Pest Management (IPM), emphasizes the natural control and prevention of pests.

The IPM approach and many of the reduced-risk pest management tools that are developed and promoted with CDPR support are valuable to conventional and organic producers alike.

Q: Should consumers be concerned about pesticide residues on produce?

A: In California, CDPR purchases fresh organic and conventionally grown produce at retail and wholesale outlets, distribution centers and farmers' markets throughout the state to test for illegal pesticide residues. We give special emphasis to commodities consumed by infants and children. Our fresh produce pesticide residue monitoring program – the largest state program of its kind – is in addition to the U.S. Food and Drug Administration's food safety program, and the U.S. Department of Agriculture's Pesticide Data Program that evaluates pesticide residues on agricultural commodities, including organic commodities, in the U.S. food supply. All programs consistently confirm that most produce has no detectable pesticide residues, and residues that are detected generally fall well below allowable limits to protect public health.





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Q&A provided by USDA and U.S. EPA

Q: How can the public be confident that pesticides with no tolerance levels are safe?

A: A tolerance, or the exemption from the requirement of a tolerance, must be established for each active and inert ingredient in the formulation before a pesticide can be registered for use on a food or feed crop, or for use in a food processing or storage area. Pesticides registered for use on organic and conventional crops undergo the same rigorous scientific evaluation by U.S. EPA to ensure they will not harm people when used according to label instructions. When a pesticide is exempt from the requirement of a tolerance, this means the agency has determined that all levels of the pesticide that may remain in food under the conditions of use are safe. More information on tolerances is posted at: <http://www.epa.gov/pesticides/bluebook/chapter11.html>.

Q: Which pesticides approved for use on organic crops are exempt from the requirement of a tolerance level?

A: Pesticides approved for use on organic crops and exempt from the requirement of a tolerance are on both of the following lists:

• *Code of Federal Regulations, pesticides exempt from a tolerance:*

<http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=76f47def9211bb80831286c8ce91622c&rgn=div5&view=text&node=40:25.0.1.1.28&idno=40#40:25.0.1.1.28.4>.

• *USDA's National Organic Program National List of Allowed and Prohibited Substances:*

<http://www.ams.usda.gov/AMSv1.0/ams.fetchTemplateData.do?template=TemplateJ&leftNav=NationalOrganicProgram&page=NOPNationalList&description=National%20List%20of%20Allowed%20and%20Prohibited%20Substances&acct=nopgeninfo>

Q: What is a minimum-risk pesticide?

A: Minimum-risk pesticides are a special class of pesticides not subject to federal registration requirements because their ingredients are considered safe if used according to label directions. A list of exempt active ingredients is posted at: http://www.epa.gov/opbppd1/biopesticides/regtools/25b_list.htm.

Q: What data sources are available to the public that show pesticide use on organic crop production?

A: Since 1991, the National Science Laboratory (NSL) chemistry staff has performed pesticide residue analysis for the annual USDA Pesticide Data Program report. This program evaluates pesticide residues on agricultural commodities, including organic commodities, in the U.S. food supply, emphasizing commodities highly consumed by infants and children: www.ams.usda.gov/PesticideDataProgram.

2010 – 2011 Pilot Study: Pesticide Residue Testing of Organic Produce

In 2010, the NSL also performed the testing for the National Organic Program's pesticide residue testing pilot study, which included 571 domestic and foreign fruit and vegetable samples bearing the USDA organic seal. View the full report at <http://bit.ly/residue-pilot-study>.



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Q: Are there less pesticide residues on organic crops than on conventionally grown crops?

A: Some of the studies evaluating this relationship are described in the discussion of the Pilot Study report: <http://bit.ly/residue-pilot-study>.

Q: In November 2012, the USDA Agricultural Marketing Service announced there would be mandatory pesticide residue testing, effective Jan. 1, 2013. This rule requires that certifying agents must annually sample and conduct residue testing from a minimum of 5 percent of the operations they certify. What is the intent and significance of this new testing program?

A: This additional testing will help certifying agents identify and take enforcement action against farms and businesses intentionally using prohibited substances or methods. Additionally, certifying agents can use test results to identify and address instances in which organic products may have unintentionally come in contact with prohibited substances. For example, when test results suggest pesticide drift from neighboring farms or facilities, this could lead certifying agents to require a larger buffer zone between the organic and non-organic farms or better cleaning before organic products use shared handling facilities. Overall, this action will discourage mislabeling and tighten oversight of USDA organic products. This increased oversight will increase consumer confidence in organic products worldwide, supporting continued growth of the \$32 billion organic industry in the United States.

Final Rule: Periodic Residue Testing (<http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5101235>) Strengthens testing requirements in USDA organic regulations

Pilot Study: Pesticide Residue Testing (<http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5101234>) Serves as a model for pesticide residue testing projects

Consumer Questions and Answers (<http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5101208>)

Q: Are these data available to the public?

A: Certifying agents must retain the residue testing results and make them available to the public upon request. USDA auditors review these results during each certifying agent's audit.