



The Ohio State University Extension Vegetable Crops

Volume 20, Number 1, January 7, 2013. On the WEB at: <http://vegnet.osu.edu>

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Editors Note: This past Saturday, The New York Times reported, in a front page story, on a new set of proposed rules for food safety for growers and food processors: Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption. Vegetable growers should become familiar with the new provisions. The FDA document is unpublished, but on 01/16/2013 it is scheduled to be published and available on the FDA page. Until then, you can download the [pre-publication PDF version](#). A public comment period on the new proposal will be available. Submit either electronic or written comments on the proposed rule by May 16, 2013. Directions are in the document for comment submission. The NYT's article is below followed by a summary of the provisions as presented in the PDF document.

F.D.A. Offers Broad New Rules to Fight Food Contamination

By [STEPHANIE STROM](#), January 4, 2013, The New York Times

The [Food and Drug Administration](#) on Friday proposed two sweeping rules aimed at preventing the contamination of produce and processed foods, which has sickened tens of thousands of Americans annually in recent years.

action after contamination has been identified. It is a long-awaited step toward codifying the [food safety](#) law that Congress passed two years ago.

Changes include requirements for better record keeping, contingency plans for handling outbreaks and measures that would prevent the spread of contaminants in the first place. While food producers would have latitude in determining how to execute the rules, farmers would have to ensure that water used in irrigation met certain standards and food processors would need to find ways to keep fresh food that may contain bacteria from coming into contact with food that has been cooked.

New safety measures might include requiring that farm workers wash their hands, installing portable toilets in fields and ensuring that foods are cooked at temperatures high enough to kill bacteria.

Whether consumers will ultimately bear some of the expense of the new rules was unclear, but the agency estimated that the proposals would cost food producers tens of thousands of dollars a year.

A big question to be resolved is whether Congress will approve the money necessary to support the oversight. President Obama requested \$220 million in his 2013 budget, but Dr. Margaret Hamburg, commissioner of the F.D.A., said "resources remain an ongoing concern."

Nonetheless, agency officials were optimistic that the new rules would protect consumers better.

"These new rules really set the basic framework for a modern, science-based approach to food safety and shift us from a strategy of reacting to problems to a strategy for preventing problems," Michael R.

Taylor, deputy commissioner for foods and veterinary medicine, said in an interview. The Food and Drug Administration is responsible for the safety of about 80 percent of the food that Americans consume. The rest falls to the Agriculture Department, which is responsible for meat, poultry and some eggs.

[One in six Americans](#) becomes ill from eating contaminated food each year, the government estimates; most of them recover without concern, but roughly 130,000 are hospitalized and 3,000 die. The agency estimated the new rules could prevent about 1.75 million illnesses each year.

Congress passed the [Food Safety](#) Modernization Act in 2010 after a wave of incidents involving tainted eggs, peanut butter and spinach sickened thousands of people and led major food makers to join consumer advocates in demanding stronger government oversight.

But it took the Obama administration two years to move the rules through the regulatory agency, prompting complaints that the White House was more concerned about protecting itself from Republican criticism than about public safety.

Mr. Taylor said that the delay was a function of the wide variety of foods and the complexity of the food system. "Anything that is important and complicated will always take longer than you would like," he said.

The first rule would require manufacturers of processed foods sold in the United States to come up with ways to reduce the risk of contamination. Food companies would be required to have a plan for correcting problems and for keeping records that government inspectors could audit.

An example might be to require the roasting of raw peanuts at a temperature guaranteed to kill [salmonella](#), which has been a problem in nut butters in recent years. Roasted nuts would then have to be kept separate from raw nuts to further reduce the risk of contamination, said Sandra B. Eskin, director of the safe food campaign at the Pew Charitable Trusts.

"This is very good news for consumers," Ms. Eskin said. "We applaud the administration's action, which demonstrates its strong commitment to making our food safer."

The second rule would apply to the harvesting and production of fruits and vegetables in an effort to combat bacterial contamination like E. coli, which is transmitted through feces. It would address what advocates refer to as the "four Ws" — water, waste, workers and wildlife.

Farmers would establish separate standards for ensuring the purity of water that touches, say, lettuce leaves and the water used to irrigate soil, which reaches plants only through their roots.

A farm or plant where vegetables are packaged might, for example, add lavatories to ensure that workers do not urinate in fields and post signs similar to those in restaurants that remind employees to wash their hands.

The food industry cautiously applauded the proposals, with most companies and industry groups noting that they would be poring over them and making comments as necessary in the coming weeks.

"Consumers expect industry and government to work together to provide Americans and consumers around the world with the safest possible products," the Grocery Manufacturers Association said in a statement. The group added that the food safety act and putting it into effect "can serve as a role model for what can be achieved when the private and public sectors work together to achieve a common goal."

The association noted that the government would have to issue more than 50 regulations to fully carry out the new law.

The businesses that must comply with the proposals may face new costs, but how much remains to be seen. Dr. Hamburg said that the measures might save businesses money in the long run, and that in many cases, they already take such precautions voluntarily.

The agency estimated that it would cost large individual farms as much as \$30,000 a year to comply with the new rules, and the food manufacturing industry as a whole as much as \$475 million a year. It said it would finance the regulations in part from savings within its budget and from fees for things like reinspections, which Congress has already authorized.

In a conference call with reporters, Mr. Taylor, the deputy commissioner, said some foods would require more attention than others. Fruits and vegetables destined for canning operations, for instance, might be subject to less stringent guidelines because they are processed using heat that would kill bacteria, unlike produce intended for raw consumption. Vegetables that are much more likely to be consumed cooked, like potatoes and artichokes, would be exempt from the rules, Mr. Taylor said.

“We were directed by Congress to establish risk-based standards that are practical, and we think this approach targets what will be significant from a public health standpoint,” he said. “If we get evidence to the contrary, we will make adjustments.”

While such precautions may seem obvious and some food producers and makers may already be taking them, there has not been any legal requirement they even consider doing so.

“We’re not going to relinquish all risk of contamination, but these steps will make us think more about what we can do to reduce it,” Mr. Taylor said.

After a 120-day period for public comment, the agency will complete the rules.

Other rules are pending, including one that would cover importers’ responsibilities for the safety of food products grown or made overseas. About 15 percent of food eaten by Americans — and an even higher percentage of produce — is imported.

Summary of the Major Provisions of the Regulatory Action

The proposed rule would establish science-based minimum standards for the safe growing, harvesting, packing, and holding of produce on farms. We propose new standards in the following major areas:

Worker Training and Health and Hygiene

- Establish qualification and training requirements for all personnel who handle (contact) covered produce or food-contact surfaces and their supervisors (proposed §§ 112.21, 112.22, and 112.23);
- Require documentation of required training (proposed § 112.30); and Establish hygienic practices and other measures needed to prevent persons, including visitors, from contaminating produce with microorganisms of public health significance (proposed §§ 112.31, 112.32, and 112.33).

Agricultural Water

- Require that all agricultural water must be of safe and sanitary quality for its intended use (proposed § 112.41). Agricultural water is defined in part as water that is intended to, or likely to, contact the harvestable portion of covered produce or food-contact surfaces (proposed § 112.3(c));

- Establish requirements for inspection, maintenance, and follow-up actions related to the use of agricultural water, water sources, and water distribution systems associated with growing, harvesting, packing, and holding of covered produce (proposed §§ 112.42 and 112.46);

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- Require treatment of agricultural water if you know or have reason to believe that the water is not safe and of adequate sanitary quality for its intended use, including requirements for treating such water and monitoring its treatment (proposed § 112.43);
- Establish specific requirements for the quality of agricultural water that is used for certain specified purposes, including provisions requiring periodic analytical testing of such water (with exemptions provided for use of public water supplies under certain specified conditions or treated water), and requiring certain actions to be taken when such water does not meet the quality standards (proposed §§ 112.44 and 112.45); and provide for alternative requirements for certain provisions under certain conditions (proposed § 112.12); and
- Require certain records, including documentation of inspection findings, scientific data or information relied on to support the adequacy of water treatment methods, treatment monitoring results, water testing results, and scientific data or information relied on to support any permitted alternatives to requirements (proposed § 112.50).

Biological Soil Amendments

- Establish requirements for determining the status of a biological soil amendment of animal origin as treated or untreated, and for their handling, conveying, and storing (proposed §§ 112.51, 112.52)
- Prohibit the use of human waste for growing covered produce except in compliance with EPA regulations for such uses or equivalent regulatory requirements (proposed § 112.53);

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- Establish requirements for treatment of biological soil amendments of animal origin with scientifically valid, controlled, physical and/or chemical processes or composting processes that satisfy certain specific microbial standards (proposed §§ 112.54 and 112.55); and provide for alternative requirements for certain provisions under certain conditions (proposed § 112.12);
- Establish application requirements and minimum application intervals for untreated and treated biological soil amendments of animal origin (proposed § 112.56); and provide for alternative requirements for certain provisions under certain conditions (proposed § 112.12); and
- Require certain records, including documentation of application and harvest dates

relevant to application intervals; documentation from suppliers of treated biological soil amendments of animal origin, periodic test results, and scientific data or information relied on to support any permitted alternatives to requirements (proposed § 112.60).

Domesticated and Wild Animals

- If animals are allowed to graze or are used as working animals in fields where covered produce is grown and under the circumstances there is a reasonable probability that grazing or working animals will contaminate covered produce, require, at a minimum, an adequate waiting period between grazing and harvesting for covered produce in any growing area that was grazed, and measures to prevent the introduction of known or reasonably foreseeable hazards into or onto covered produce (proposed § 112.82); and If under the circumstances there is a reasonable probability that animal intrusion will contaminate covered produce, require monitoring of those areas that are used for a covered activity for evidence of animal intrusion immediately prior to harvest and, as needed, during the growing season (proposed § 112.83).

Equipment, Tools, and Buildings

- Establish requirements related to equipment and tools that contact covered produce and instruments and controls (including equipment used in transport), buildings, domesticated animals in and around fully-enclosed buildings, pest control, hand-washing and toilet facilities, sewage, trash, plumbing, and animal excreta (proposed §§ 112.121-134); and Require certain records related to the date and method of cleaning and sanitizing equipment used in growing operations for sprouts, and in covered harvesting, packing, or holding activities (proposed § 112.140).

Sprouts Establish measures that must be taken related to seeds or beans for sprouting (proposed § 112.141);

- Establish measures that must be taken for the growing, harvesting, packing, and holding of sprouts (proposed § 112.142);
- Require that you test the growing environment for *Listeria* spp. or *L. monocytogenes* and that you test each production batch of spent irrigation water or sprouts for *E. coli* O157:H7 and *Salmonella* species and take appropriate follow-up actions (proposed §§ 112.143, 112.144, 112.145, 112.146); and

- Require certain records, including documentation of your treatment of seeds or beans for sprouting, a written environmental monitoring plan and sampling plan, test results, and certain methods used (proposed § 112.150).

As proposed, the effective date is 60 days after a final rule is published, however, we are providing for a longer timeline for farms to come into compliance. Small businesses (i.e., those subject to proposed part 112 and, on a rolling basis, the average annual monetary value

of food sold during the previous three-year period is no more than \$500,000) would have three years after the effective date to comply; for some of the water requirements, they would have five years. In addition, very small businesses (i.e., those subject to proposed part 112 and, on a rolling basis, the average annual monetary value of food sold during the previous three-year period is no more than \$250,000) would have four years after the effective date to comply; for some of the water requirements, they would have six years. All other farms would have two years after the effective date to comply; for some of the water requirements, they would have four years to comply.

2013 Midwest Vegetable Production Guide



In 2013, Ohio joins the Mid-West Vegetable Production Guide. Hard copies available soon and will be for sale at the OSU Extension [eStore](#) and at the OPGMA Congress.

[2013 PDF version now available for download from Purdue, Click Here!](#)

RECERTIFICATION SEASON OFFERS MEETING OPPORTUNITIES FOR PRIVATE APPLICATORS

From Jan. 2013 issue of OSU's Pep-Talk

Winter brings numerous opportunities for licensed applicators to attend educational meetings and receive recertification credit to keep their license current. Private applicators have a choice of over 90 meetings throughout the state of Ohio which will be conducted by Ohio State University Extension.

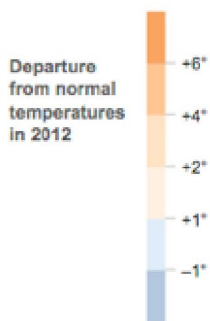
A complete list of these meetings is available at <http://pested.osu.edu/privaterecert.html> Private applicators need three hours of recertification credit which includes core and category-specific training. The meetings are conducted by OSU Extension educators with expertise in agriculture. Topics include new technologies to address pesticide resistance, drift management and invasive species. Applicators will be able to learn about more effective pesticide management to enhance crop productivity while protecting the environment.

Not Even Close: 2012 Was Hottest Ever in U.S.

By [JUSTIN GILLIS](#) January 8, 2013, New York Times

Record-Setting Heat Across the U.S. in 2012

The average temperature across the contiguous United States in 2012 was 55.3° (3.2° above normal). This ranks as the warmest year since records began in 1895. [Related Article »](#)



The [numbers](#) are in: 2012, the year of a surreal March heat wave, a severe drought in the Corn Belt and a huge storm that caused broad devastation in the Middle Atlantic States, turns out to have been the hottest year ever recorded in the contiguous United States.

How hot was it? The temperature differences between years are usually measured in fractions of a degree, but last year's 55.3 degree average demolished the previous record, set in 1998, by a full degree Fahrenheit.

If that does not sound sufficiently impressive, consider that 34,008 daily high records were set at weather stations across the country, compared with only 6,664 record lows, according to a count maintained by the [Weather Channel](#) meteorologist Guy Walton, using federal temperature records.

That ratio, which was roughly in balance as recently as the 1970s, has been out of whack for decades as the country has warmed, but never by as much as it was last year.

"The heat was remarkable," said Jake Crouch, a scientist with the [National Climatic Data Center](#) in Asheville, N.C., which released the official climate compilation on Tuesday. "It was prolonged. That we beat the record by one degree is quite a big deal."

Scientists said that natural variability almost certainly played a role in last year's extreme heat and drought. But many of them expressed doubt that such a striking new record would have been set without the backdrop of [global warming](#) caused by the human release of greenhouse gases. And they warned that 2012 was probably a foretaste of things to come, as continuing warming makes heat extremes more likely.

Even so, the last year's record for the United States is not expected to translate into a global temperature record when figures are released in the coming weeks. The year featured a [La Niña](#) weather pattern, which tends to cool the global climate over all, and scientists expect it to be the world's eighth- or ninth-warmest year on record.

Assuming that prediction holds up, it will mean that the 10 warmest years on record all fell within the past 15 years, a measure of how much the planet has warmed. Nobody who is under 28 has lived through a month of global temperatures that fell below the 20th-century average, because the last such month was February 1985.

Last year's weather in the United States began with an unusually warm winter, with relatively little snow across much of the country, followed by a March that was so hot that trees burst into bloom and swimming pools opened early. The soil dried out in the March heat, helping to set the stage for a drought that peaked during the warmest July on record.

The drought engulfed 61 percent of the nation, killed corn and soybean crops and sent prices spiraling. It was comparable to a severe drought in the 1950s, Mr. Crouch said, but [not quite as severe as the legendary Dust Bowl](#) drought of the 1930s, which was exacerbated by poor farming practices that allowed topsoil to blow away.

Extensive records covering the lower 48 states go back to 1895; Alaska and Hawaii have shorter records and are generally not included in long-term climate comparisons for that reason.

Mr. Crouch pointed out that until last year, the coldest year in the historical record for the lower 48 states, 1917, was separated from the warmest year, 1998, by only 4.2 degrees Fahrenheit. That is why the 2012 record, and its one degree increase over 1998, strikes climatologists as so unusual.

"We're taking quite a large step above what the period of record has shown for the contiguous United States," Mr. Crouch said.

In addition to being the nation's warmest year, 2012 turned out to be the second-worst on a measure called the [Climate Extremes Index](#), surpassed only by 1998.

Experts are still counting, but so far 11 disasters in 2012 have exceeded a threshold of \$1 billion in damages, including several tornado outbreaks; Hurricane Isaac, which hit the Gulf Coast in August, and, late in the year, [Hurricane Sandy](#), which caused damage likely to exceed \$60 billion in nearly half the states, primarily in the mid-Atlantic region.

Among those big disasters was one bearing a label many people had never heard before: the [derecho](#), a line of severe, fast-moving thunderstorms that struck central and eastern parts of the country starting on June 29, killing more than 20 people, toppling trees and knocking out power for millions of households.

For people who escaped both the derecho and Hurricane Sandy relatively unscathed, the year may be remembered most for the sheer breadth and oppressiveness of the summer heat wave. By the calculations of the climatic data center, a third of the nation's population experienced 10 or more days of summer temperatures exceeding 100 degrees Fahrenheit.

Among the cities that set temperature records in 2012 were Nashville; Athens, Ga.; and Cairo, Ill., all of which hit 109 degrees on June 29; Greenville, S.C., which hit 107 degrees on July 1; and Lamar, Colo., which hit 112 degrees on June 27.

With the end of the growing season, coverage of the drought has waned, but the drought itself has not. Mr. Crouch pointed out that at the beginning of January, 61 percent of the country was still in moderate to severe drought conditions. "I foresee that it's going to be a big story moving forward in 2013," he said.