

April 1999

FRESH PRODUCE

Potential Consequences of Country-of-Origin Labeling



**Resources, Community, and
Economic Development Division**

B-282173

April 21, 1999

The Honorable Thad Cochran
Chairman
The Honorable Herb Kohl
Ranking Minority Member
Subcommittee on Agriculture, Rural
Development, and Related Agencies
Committee on Appropriations
United States Senate

The Honorable Joe Skeen
Chairman
The Honorable Marcy Kaptur
Ranking Minority Member
Subcommittee on Agriculture, Rural
Development, Food and Drug Administration,
and Related Agencies
Committee on Appropriations
House of Representatives

The containers in which fresh produce of foreign origin enters the United States must be marked with the country-of-origin. However, this identification is not required to be maintained for loose, or bulk, produce at the retail level.¹ In the past few years, several legislative proposals have been introduced to require that fresh produce be labeled at the retail level by its country of origin.

As requested by the Senate and House conferees for the Omnibus Consolidated and Emergency Supplemental Appropriations Act, 1999,² we reviewed a number of issues associated with the potential costs and benefits of a mandatory labeling requirement. Specifically, as agreed with your offices, this report provides information on (1) the potential costs associated with the compliance and enforcement of a mandatory country-of-origin labeling requirement at the retail level for fresh produce, (2) the potential trade issues associated with such a requirement, (3) the potential impact of such a requirement on the ability of the federal government and the public to respond to outbreaks of illness caused by contaminated fresh produce, and (4) consumers' views of

¹This report uses the term "loose produce" to refer to bulk produce.

²Conference Report 105-825 accompanied H.R. 4328, which became the Omnibus Consolidated and Emergency Supplemental Appropriations Act, 1999 (P.L. 105-277, Oct. 21, 1998).

country-of-origin labeling. Finally, appendix I identifies U.S. trading partners that have country-of-origin labeling requirements for fresh produce, the nature and scope of those requirements, and the record of U.S. challenges to those requirements.

For the purpose of this report, and as agreed with your offices, we assumed that the retailer would be responsible for ensuring that produce is labeled as to its country of origin and that the term “label” means any label, mark, sticker, stamp, placard, or other clear visible sign.

Results in Brief

The magnitude of compliance and enforcement costs for a country-of-origin labeling requirement at the retail level would depend on several factors, including the extent to which current labeling practices would have to be changed. According to an association representing grocery retailers, changing store signs to ensure that produce is properly labeled would cost about 2 staff hours per store per week. However, it is unclear who would bear the burden of any such additional labeling costs—retailers could absorb some or all of the costs or pass them to consumers or to their suppliers. Regarding enforcement, the Food and Drug Administration, in commenting on a recently proposed bill, estimated that federal monitoring would cost about \$56 million annually and said that enforcement would be difficult. Inspectors would need documentary evidence to determine the country-of-origin of the many produce items on display, and this documentation is often not available at each retail store. Enforcement is carried out in only one of the three states with labeling laws—in Florida, where inspectors check shipping boxes against display signs during semiannual routine state health inspections. Florida inspectors told us that they sometimes have no reliable means to verify the accuracy of labels.

According to U.S. Department of Agriculture officials and industry representatives, mandatory labeling at the retail level could be viewed by other countries as a trade barrier. For example, a country currently exporting produce to the United States may be concerned about the additional costs its exporters may incur if they are required to label loose produce. Officials also noted that countries concerned with a labeling law could take actions that could adversely affect U.S. exports. For example, these countries may develop or more strictly enforce their own labeling laws. Currently, about half of the countries that account for most of the U.S. trade in produce require country-of-origin labeling for fresh produce at the retail level. Additionally, officials from the departments of

Agriculture and State believe that a U.S. labeling law is more likely to be challenged than other countries' labeling laws because the United States is such a large importer and exporter of fresh produce.

When outbreaks of foodborne illness occur, country-of-origin labeling for fresh produce would be of limited benefit to food safety agencies in tracing the source of contamination and to the public in responding to a warning of an outbreak, according to officials from the Food and Drug Administration and the Centers for Disease Control and Prevention. It can take weeks or months for food safety agencies to identify an outbreak, determine the type of food involved, identify the source of the food contamination, and issue a warning. Retail labeling would help consumers only if they remembered the country of origin or still had the produce, or if the produce were still in the store.

Finally, according to nationwide surveys sponsored by the fresh produce industry, between 74 and 83 percent of consumers favor mandatory country-of-origin labeling for fresh produce, although they rated information on freshness, nutrition, and handling and storage as more important.³ Most consumers also prefer to buy domestic produce if price, taste, and appearance are equal. In addition, survey responses show that consumers believe that U.S. produce is safer than imported produce; however, officials from the U.S. Department of Agriculture, the Food and Drug Administration, and the Centers for Disease Control and Prevention told us that sufficient data are not available to make this determination.

Background

The Tariff Act of 1930, as amended, generally requires imported articles—such as clothing, appliances, and canned and frozen goods—to be marked by country of origin. Under the statute, however, certain articles, including fresh produce, are not required to be marked individually. For these items, the container holding the article must be marked by the country of origin. U.S. Customs Service rulings provide that when fresh produce is taken out of its container and put into an open bin

³Based on nationally representative samples of U.S. households: Three surveys were conducted between 1990 and 1998 by Vance Publishing Corporation for The Packer newspaper and were published in its annual supplement, *Fresh Trends* and one survey was conducted by the Charlton Research Group in 1996 for the Desert Grape Growers League. For the data we included in our report, we obtained frequency counts, survey instruments, and other documents, in order to review the wording of questions, sampling, mode of administration, research strategies, and the effects of sponsorship. We used only the data that we judged to be reliable and valid.

or display rack, there is no obligation to identify the items by the country of origin.⁴

Three states—Florida, Maine, and Texas—have enacted country-of-origin labeling laws for fresh produce. Florida requires all imported fresh produce to be identified by the country-of-origin by, for example, marking each produce item or placing a sign or label adjacent to the bin. Maine requires country-of-origin labeling for fresh produce at the retail level when it has been imported from countries identified as having specific pesticide violations.⁵ Texas requires country-of-origin labeling for fresh grapefruit. In addition, labeling laws for fresh produce have been proposed in at least five other states: California, Connecticut, Oregon, Rhode Island, and Virginia.

Most large grocery stores carry over 200 produce items. Fresh produce is often imported to fill seasonal needs when U.S. production is not sufficient to cover demand or to satisfy the demand for tropical fruits not normally grown in the United States. Two-thirds of imported fresh produce arrives between December and April, when U.S. production is low and limited to the southern portions of the country. The majority of these imports are warm-season vegetables like peppers, squash, and cucumbers, although some imports, such as tomatoes, occur year round.

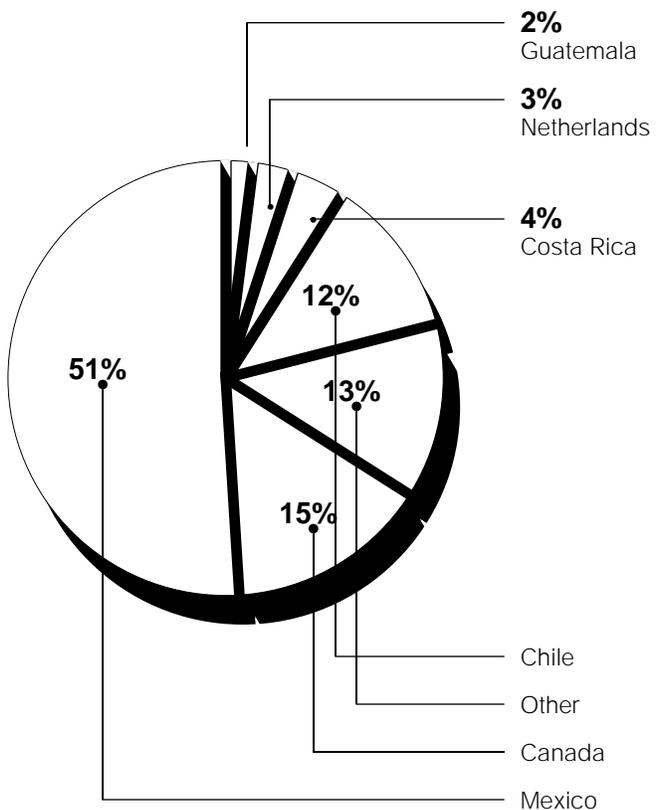
Total U.S. consumption of fresh produce has increased 43 percent since 1980, from about 56 billion pounds to nearly 80 billion pounds in 1997, the latest year for which the U.S. Department of Agriculture (USDA) has compiled such data. During this same period, the amount of fresh produce the United States imported more than doubled—from 7.5 billion pounds to 16 billion pounds. The domestic share increased by one third—from about 48 billion to about 64 billion pounds.

In 1997, most imported produce came from Mexico, Canada, and Chile, as shown in figure 1.

⁴U.S. Customs ruling HRL 722992. This ruling was interpreted in Customs ruling HRL 733798 not to require marking because open bins or display racks were not determined to constitute 'containers.'

⁵Maine also requires packages of Maine apples to state that they are from Maine and potatoes packaged in Maine to be labeled as to their country-of-origin.

Figure 1: Source of Fresh and Frozen Imported Produce, 1997, by Dollar Value



Source: GAO's analysis of data from USDA's Economic Research Service.

The United States is also the world's largest exporter of fresh produce, valued at \$2.9 billion in 1998. Three-fourths of exported U.S. produce goes to Canada, the European Union, Japan, Hong Kong, and Mexico.⁶

Uncertainties Exist About the Costs Associated With Compliance and Enforcement

Complying with mandatory country-of-origin labeling for fresh produce could change the way retailers and others involved in the production and distribution of produce do business, thereby affecting their costs and consumers' choices. Furthermore, such a law could be difficult to enforce.

Magnitude of Compliance Costs and the Responsibility for These Costs Are Uncertain

The fresh produce industry and retailers will have to incur costs to comply with a mandatory country-of-origin labeling law. The additional efforts and associated costs for compliance would depend on the specific requirements of the law and the extent to which current practices would have to be changed. For example, some produce is already labeled with a brand sticker. In these cases, compliance would require adding the name of the country to the sticker. For unlabeled produce, the additional effort would be more significant.

Associations we spoke with representing grocery retailers are particularly concerned that a labeling law would be unduly burdensome for a number of reasons. First, retailers would have to display the same produce items from different countries separately if each individual item is not marked, which in some cases would result in only partially filled bins. According to these retailers, consumers are less likely to buy from such bins because they are less appealing, causing the retailers to lose sales. Second, retailers report that they do not have sufficient display space to separate produce and still stock all the different varieties consumers want. Large grocery stores usually carry over 200 produce items. Third, because the country of origin of retailers' produce shipments may vary each week, retailers would incur costs to change store signs and labels to reflect the origins of the different shipments. According to the Food Marketing Institute, an association representing grocery retailers, it would take about 2 staff hours per store per week to ensure that imported produce is properly labeled. Costs would also be incurred if retailers were required to maintain paperwork at each store as evidence of the origin of these multiple

⁶The European Union is composed of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

shipments. Florida does not require its retail stores to maintain paperwork documenting the country of origin.

It is unclear who would bear the burden of compliance. A law requiring retailers to ensure that produce is properly labeled would initially place at least some of the compliance costs on retailers. However, retailers would not necessarily bear all these costs. Retailers could raise prices to pass their costs to consumers. However, if consumers reduce their purchases of fresh produce in response, retailers will absorb part of the cost through lower sales volume. For produce that does not have close substitutes, and for which consumer demand is relatively insensitive to price changes, retailers are likely to be more successful in passing costs on to consumers through price increases without experiencing significant declines in sales volume.

Retailers may decide to require their suppliers to either package produce or label individual produce items. If retailers can impose this requirement without paying more for the same quantity and quality, they will have shifted the labeling costs to their suppliers. Consumer responses may also influence the eventual effect of a country-of-origin law. If consumers prefer domestic produce, they may buy more domestic and less imported produce, which would allow domestic producers to gain market share and/or raise their prices. However, if foreign countries respond by imposing their own labeling requirements, and if this resulted in foreign consumers' buying less U.S. produce, then U.S. exports could suffer.

It is also possible that a country-of-origin labeling requirement would result in fewer choices for consumers. This would occur if retailers decide to stock more prepackaged produce, which would already be labeled, and fewer bulk items, which would have to be labeled. Furthermore, if a law required labeling for imported produce only, retailers could decide to stock fewer imported produce items in order to avoid the compliance burden.

An additional cost would be borne by restaurants and other food service providers if the labeling law applies to them. They would have to let their customers know the country of origin of the produce they use, which could involve, for example, changing information on menus each time the source of the produce changed. According to the National Restaurant Association, the cost of changing menus would be "prohibitive."

Federal Agencies Would Need Enforcement Resources for an Inherently Difficult Task

According to Food and Drug Administration (FDA) and USDA officials we spoke with, enforcing a labeling law would require significant additional resources. The agency enforcing such a law would have to implement a system to ensure that the identity of produce is maintained throughout the distribution chain. While inspectors could ensure that retailers have signs or labels in place and could review documentation—if it were available—they might not be able to determine from a visual inspection that produce in a particular bin was from the country designated on the sign or label. Such documentation is often unavailable at the retail store.

It is also unclear who would be responsible for these inspections. Grocery store inspections for compliance with federal health and safety laws are now generally conducted by state and local officials, often under memorandums of understanding with the Food and Drug Administration. USDA officials pointed out that if state and local governments were to carry out the inspections required by a federal country-of-origin labeling law, such a law would have to specify the states' enforcement role and provide funding for enforcement activities.

In commenting on a Senate amendment to the fiscal year 1999 appropriations bill regarding country-of-origin labeling, FDA expressed "reservations about its priority as a public health issue, its cost to administer, and [FDA's] ability to enforce it." FDA further noted that the cost of enforcement "would be significant," and "it is unclear that enforcement would even be possible." Among other enforcement problems, FDA cited the need for accompanying paperwork to verify country-of-origin labels and said this would place "an enormous burden" on industry. FDA estimated that the federal cost for 1-year's monitoring under this proposed amendment would be about \$56 million.

The three states that have labeling laws vary in their degree of enforcement. In Florida, which has a mandatory labeling law for all imported produce, enforcement occurs during the course of routine state health inspections that are conducted about twice each year in every store. During the routine inspections, officials check the shipping boxes and packages in the store against the display signs or labels—a task they estimate requires about 15 minutes per visit. However, they said they sometimes have no reliable means to verify the accuracy of these signs and labels. When violations are found, Florida officials said that it takes 5 minutes to process paperwork for new violations and 30 minutes for repeat violations. Figure 2 shows produce labeled in Florida grocery stores.

Figure 2: Labeled Produce in Florida Grocery Stores



According to the Inspection Manager for Maine's Department of Agriculture, Maine does not enforce its country-of-origin labeling requirements because the list of countries to be identified keeps changing and paperwork to verify the country of origin is often unavailable. In Texas, the labeling law applies only to grapefruit. According to a Texas Department of Agriculture official, grapefruit is rarely imported into Texas, and the labeling law is not currently being enforced.

A Labeling Law Could Have Trade Implications

Depending on what it might require and how it might be implemented, a law mandating country-of-origin labeling for fresh produce could have adverse trade implications. U.S. trading partners might challenge the law's consistency with international trade obligations or take steps to increase their own country-of-origin labeling requirements. Moreover, according to USDA officials, enacting a labeling law could make it more difficult for the United States to oppose foreign countries' labeling requirements that it finds objectionable.

Any labeling law would need to be consistent with U.S. international trade obligations in order to withstand potential challenges from U.S. trading partners. International trade rules that the United States has agreed to, such as those embodied in the World Trade Organization (WTO) and the North American Free Trade Agreement (NAFTA), permit country-of-origin labeling.⁷ For example, WTO provisions recognize the need to protect consumers from inaccurate information while minimizing the difficulties and inconveniences labeling measures may cause to commerce. WTO rules require, among other things, that the labeling of imported products must not result in serious damage to the product, a material reduction in its value, or an unreasonable increase in its cost.⁸ Correspondence from the Office of the U.S. Trade Representative (USTR) stated that our trading partners could raise concerns that country-of-origin labeling requirements adversely affect their exports by raising costs.

Similarly, NAFTA requires that any country-of-origin marking requirement must be applied in a manner that would minimize difficulties, costs, and

⁷The WTO was established in 1995, as a result of the Uruguay Round of the General Agreement on Tariffs and Trade (1986-94). WTO facilitates the implementation, administration, and operation of multiple agreements that govern trade among its member countries. NAFTA is a multilateral trade agreement that contains obligations governing trade among Canada, Mexico, and the United States. NAFTA negotiations began in 1991 and the agreement entered into force in 1994.

⁸In addition, country-of-origin labeling is covered as a technical regulation subject to the WTO Agreement on Technical Barriers to Trade. This agreement provides guidelines for developing and applying technical regulations.

inconveniences to a country's commerce. USTR and Department of State officials stated that Mexico requested consultations to discuss its concerns that one recently proposed U.S. country-of-origin labeling bill would violate certain NAFTA provisions on country-of-origin marking.

USDA officials and food industry representatives expressed concern that mandatory country-of-origin labeling at the retail level could be viewed as a trade barrier and might lead to actions that could hurt U.S. exports. For example, a country currently exporting produce to the United States may be concerned about additional costs if its exporters are required to label loose produce. Such a country could respond by enacting or more strictly enforcing retail labeling laws that could hinder U.S. exports. The officials were also concerned that adopting mandatory country-of-origin labeling at the retail level could complicate U.S. efforts to address other countries' labeling laws that the United States found objectionable. According to USDA officials, the United States has opposed certain country-of-origin labeling in other countries for various reasons, including concerns about the potential of those laws to raise the costs of U.S. exports and discourage consumers from purchasing imported goods.

While U.S. representatives have worked informally and cooperatively to oppose certain foreign country-of-origin labeling requirements, the United States has not formally challenged any such requirements within the WTO. WTO officials said they were unaware of any formal challenges to any country's country-of-origin labeling requirement. However, USDA and WTO officials agreed that the absence of any formal challenge does not necessarily indicate that existing country-of-origin labeling requirements are consistent with WTO rules. Moreover, the absence of formal challenges to existing laws does not preclude these laws from being challenged in the future. Finally, because the United States is such a large importer and exporter of fresh produce, officials with USDA and the Department of State pointed out that a U.S. labeling law is more likely to be formally challenged than are other countries' laws.

In February and March 1999, we surveyed U.S. embassy agricultural attachés in 45 countries with which the United States exports and imports agricultural products to determine which countries have and enforce country-of-origin labeling requirements for fresh produce at the retail level. Our survey included 28 countries that account for most of the U.S. produce imports and exports and 17 countries that USDA identified as having produce labeling requirements.⁹ Of the 28 countries, 13 (46 percent)

⁹USDA surveyed these countries in 1998.

require country-of-origin labeling for bulk produce at the retail level, and 15 require such labeling for packaged produce.¹⁰ Attachés in these countries reported the countries with requirements generally have a high level of compliance and moderate to high levels of enforcement.¹¹ Appendix I identifies the U.S. trading partners that require country-of-origin labeling for fresh produce and the scope of their requirements.

Labeling Would Provide Limited Benefits in Responding to Outbreaks of Foodborne Illnesses

Considerable time—several weeks or months—generally passes between the outbreak of a produce-related illness, the identification of the cause, and a warning to the public about the risks of eating a specific produce item, according to the Centers for Disease Control and Prevention (CDC) and FDA officials. By the time a warning is issued, country-of-origin labeling would benefit consumers only if they remembered the country of origin or still had the produce, or if the produce were still in the store. Consequently, country-of-origin labeling would be of limited value in helping consumers respond to a warning of an outbreak.

Several factors contribute to the delays in identifying causes of foodborne illness, including how quickly consumers become ill after purchasing and eating the food and whether they seek medical attention. State and local agencies report known or suspected foodborne illnesses to CDC, which uses this information to identify patterns of related illnesses—outbreaks—and to work with state, local, and FDA officials to identify the source. Once the source is identified, state and local public health officials generally issue a warning to the public if the product is still available in the marketplace.

In most cases of foodborne illness, however, officials are not able to identify the specific point at which the food associated with the outbreak became contaminated. Between 1990 and 1998, CDC identified 98 outbreaks of foodborne illnesses linked to fresh produce. In 86 of these cases, the point of contamination was never identified. The remaining 12 cases were traced to contamination in food handling and to seed that was contaminated. Appendix II provides information on outbreaks of illnesses related to contaminated fresh produce since 1990.

¹⁰The European Union (EU) has a single requirement for labeling of both loose and packaged produce that applies to all 15 EU member countries. Our 28 largest produce trading partners include 6 EU member countries.

¹¹Although the EU has a single labeling requirement for all 15 member countries, we surveyed these countries individually to obtain a better understanding of compliance and enforcement with the labeling requirement.

Because of the time needed to identify the cause of an outbreak, country-of-origin labeling would not generally be useful in preventing more consumers from becoming ill. For example, when cyclospora-contaminated raspberries from Guatemala caused outbreaks of illnesses in 1996 and 1997, many individuals did not become ill until a week or more after they ate the fruit.

CDC officials said that country-of-origin labeling might be a starting point in tracing the source of contamination if a person who had eaten a contaminated product remembered the source for that product. However, they said that more detailed information identifying every step from farm to table—for both domestically grown and imported produce—would be of greater use in tracing the source of an outbreak and identifying the practices that resulted in the contamination. Identifying such practices may enable officials to devise control measures that could be used throughout the industry to decrease the potential for additional illnesses. CDC officials also pointed out that a country-of-origin labeling law would be more useful to them if it required retailers to keep better records, including invoices and shipping documents. Such records would allow investigators to identify the source of produce that was in grocery stores at a particular time in the past.

Finally, FDA and CDC officials observed that a law exempting food service establishments from country-of-origin labeling would be of limited value because many identified outbreaks have been traced to food served in restaurants or at catered meals. U.S. consumers are eating more meals, including more fresh produce, outside the home. Indeed, a significant portion of the illnesses that were traced to Guatemalan raspberries were contracted from meals eaten outside the home.

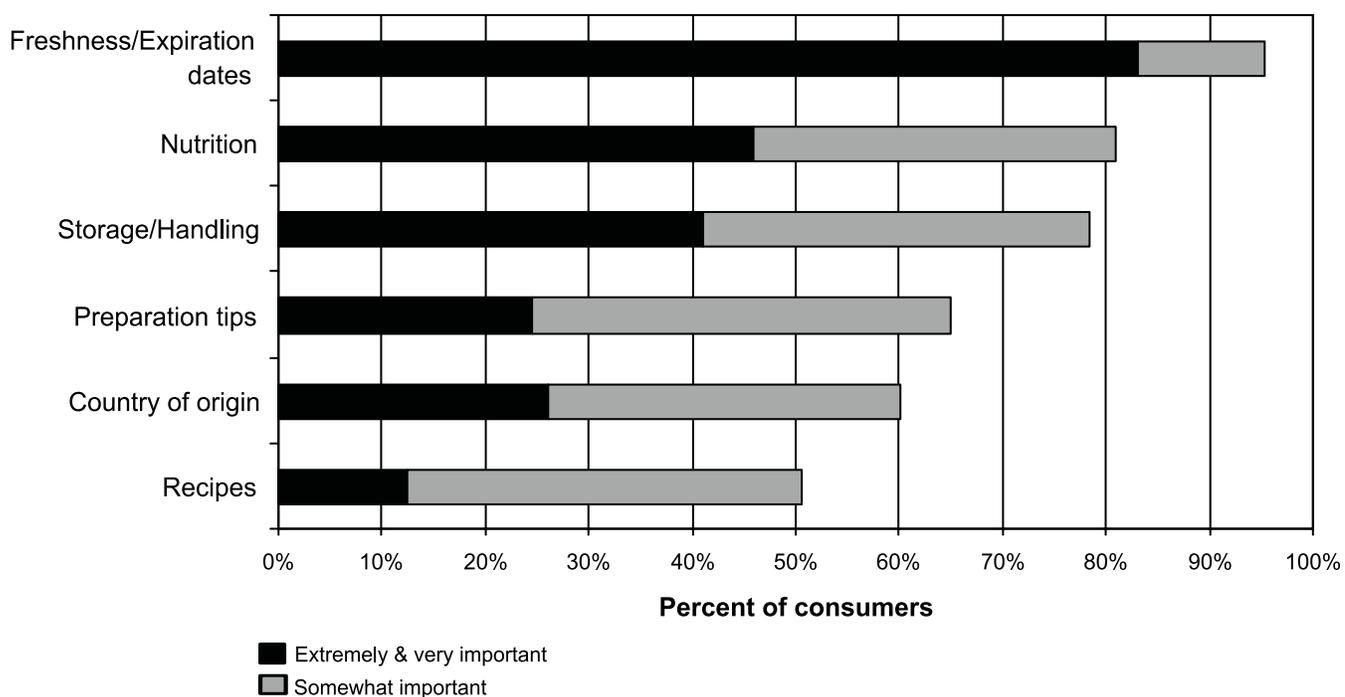
Although Consumers Favor Labeling, Other Information Is More Important to Them

Surveys representing households nationwide, sponsored by the produce industry between 1990 and 1998, showed that between 74 and 83 percent of consumers favor mandatory country-of-origin labeling for fresh produce at the retail level.¹² However, when asked to rate the importance of several types of labeling information, households reported information on freshness as most important, followed by information on nutrition, storage

¹²Surveys conducted for The Packer newspaper in 1990, 1992, and 1998 and for the Desert Grape Growers League in 1996. For the data we included in our report, we obtained frequency counts, survey instruments, and other documents, in order to review question wording, sampling, mode of administration, research strategies, and the effects of sponsorship. We only used data that we judged to be reliable and valid.

and handling, and preparation tips. Information on country-of-origin was ranked fifth, as shown in figure 3.¹³

Figure 3: Importance of Different Types of Produce-Labeling Information to Consumers



Source: GAO's analysis of 1996 survey data collected for The Packer, a publication of the fresh produce industry.

In addition, most consumers would prefer to buy U.S. produce if all other factors—price, taste and appearance—were equal.¹⁴ And, about half of all consumers would be willing to pay “a little more to get U.S. produce.”¹⁵ However, the survey did not specify the additional amount that consumers would be willing to pay.

¹³Survey conducted for The Packer newspaper in 1996.

¹⁴Survey conducted for the Desert Grape Growers League in 1996.

¹⁵Survey conducted for the Desert Grape Growers League in 1996.

Furthermore, according to a 1998 industry-sponsored nationwide survey, 70 percent of consumers believe that domestically grown produce is safer.¹⁶ In the same survey, about half of consumers reported having concerns about health and safety and growing conditions, and about one-third had concerns with cleanliness and handling when buying imported produce. Despite these concerns, officials with USDA, CDC, and FDA, told us that sufficient data are not available to compare the safety of domestic and imported produce. However, CDC officials told us that, in the absence of specific food production controls, the potential for contaminated produce increases where poor sanitary conditions and polluted water are more prevalent.

In addition, Consumers Union—a nationally recognized consumer group—used data collected by USDA’s Agricultural Marketing Service to compare the extent to which multiple pesticide residues were found in selected domestic and imported fresh produce.¹⁷ For its analysis, Consumers Union developed a toxicity index, which it used to compare the pesticide residues. According to this analysis, pesticide residues on imported peaches, winter squash, apples, and green beans had lower toxicity levels than those found on their domestically grown counterparts. In contrast, the pesticide residues on domestically grown tomatoes and grapes were less toxic than their imported counterparts. The study acknowledges that almost all of the pesticide residues on the samples were within the tolerance levels allowed by the Environmental Protection Agency (EPA). We did not independently determine the validity of the toxicity index developed by Consumers Union or verify its analysis or results. However, according to FDA officials, pesticide residues present a lower health risk than the disease-causing bacteria that can be found on food.

Agency Comments and Our Response

We provided the departments of Agriculture and State, Office of the U.S. Trade Representative, CDC, U.S. Customs Service, EPA, and FDA with a draft of this report for their review and comment. These agencies generally agreed with the facts presented in the report and provided technical comments, which we incorporated as appropriate. Officials commenting on the report included the Deputy Administrator, Fruit and Vegetable Programs, Agricultural Marketing Service, USDA; the

¹⁶Survey conducted for The Packer newspaper. Twenty percent said U.S. produce was about the same, 3 percent—worse, and 6 percent—don’t know.

¹⁷Do You Know What You Are Eating? An Analysis of U.S. Government Data on Pesticide Residues in Foods, Consumers Union, Feb. 1999.

Economic/Commercial Officer in the Agricultural Trade Policy Division, Department of State; the Director of Agricultural Affairs and Technical Barriers to Trade, Office of the U.S. Trade Representative; the Director of Food Safety Initiative Activities, Division of Bacterial and Mycotic Diseases, National Center for Infectious Diseases, CDC; a Senior Attorney, Office of Regulations and Rulings, U.S. Customs Service; the Interim Associate Commissioner for Legislative Affairs, FDA.

We performed our review from November 1998 through March 1999 in accordance with generally accepted government auditing standards. Our scope and methodology are discussed in appendix III.

Copies of this report will be sent to Senator Richard Lugar, Chairman, and Senator Tom Harkin, Ranking Minority Member, Senate Committee on Agriculture, Nutrition, and Forestry; and Representative Larry Combest, Chairman, and Representative Charles Stenholm, Ranking Minority Member, House Committee on Agriculture. We are also sending copies to the Honorable Dan Glickman, Secretary of Agriculture; the Honorable Madeleine Korbel Albright, Secretary of State; the Honorable Jane Henney, M.D., Commissioner, Food and Drug Administration; the Honorable Jeffrey P. Koplan, M.D., Director, Centers for Disease Control and Prevention; the Honorable Raymond W. Kelly, Commissioner of the U.S. Customs Service; the Honorable Jacob J. Lew, Office of Management and Budget; and Ambassador Charlene Barshefsky, the U.S. Trade Representative. We will also make copies available to others upon request.

If you would like more information on this report, please contact me at (202) 512-5138. Major contributors to this report are listed in appendix IV.



Robert E. Robertson
Associate Director, Food
and Agriculture Issues

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Figure 3: Importance of Different Types of Produce-Labeling Information to Consumers

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Abbreviations

CDC	Centers for Disease Control and Prevention
EPA	Environmental Protection Agency
EU	European Union
FDA	Food and Drug Administration
NAFTA	North America Free Trade Agreement
USDA	U.S. Department of Agriculture
WTO	World Trade Organization

U.S. Trading Partners That Require Country-Of-Origin Labeling for Fresh Produce and the Scope of Their Requirements

This appendix identifies the U.S. trading partners that have country-of-origin labeling requirements for fresh produce at the retail level, the nature and scope of these requirements, and the record of U.S. challenges to those requirements.

Table I.1 identifies U.S. trading partner countries, their requirements for loose or packaged fresh produce to be labeled at the retail level, and the degree of compliance and enforcement with those requirements. This information is based on our survey of U.S. agricultural attachés for 45 countries. Of the 45 countries, 28 account for most of U.S. trade in produce. We also surveyed the 17 countries that were not among the largest produce trading partners but were identified in the Foreign Agricultural Service's 1998 Foreign Country of Origin Labeling Survey as having produce labeling requirements. As the table indicates, 13 of the 28 major produce trading partners require country-of-origin labeling for loose produce at the retail level, and 15 require labeling for packaged produce. Attachés reported that these countries generally have a high level of compliance and a moderate to high level of enforcement.

Officials of the World Trade Organization, the departments of Agriculture and State, the Office of the U.S. Trade Representative, and U.S. agricultural attaches were not able to identify any formal U.S. challenges to country-of-origin labeling requirements for fresh produce.

Table I.1: Trading Partner Countries' Requirements for Country-Of-Origin Labeling of Fresh Produce at the Retail Level

Country	Scope of labeling requirement	Degree of compliance	Degree of enforcement
Major produce trading partners (28)			
Argentina	No requirement		
Australia	Loose and packaged	^a	^a
Brazil	Packaged	High	Moderate
Canada	Loose ^b and packaged	High	High
Chile	No requirement		
Costa Rica	Packaged	High	Moderate
Dominican Republic	No requirement		
European Union	Loose and packaged		
Belgium		Very high	Moderate
France		Very high	Very high
Luxembourg		Very high	Moderate
Netherlands		High	High
Spain		High	High

(continued)

**Appendix I
U.S. Trading Partners That Require
Country-Of-Origin Labeling for Fresh
Produce and the Scope of Their
Requirements**

Country	Scope of labeling requirement	Degree of compliance	Degree of enforcement
United Kingdom		Very high	Very high
Guatemala	No requirement		
Honduras	No requirement		
Hong Kong	No requirement		
Indonesia	No requirement		
Japan	Loose and packaged ^c	High	High
Malaysia	No requirement		
Mexico	Loose and packaged	High	Moderate
New Zealand	No requirement		
Peru	Loose and packaged	High	Moderate
Philippines	No requirement		
Republic of Korea	Loose and packaged	High	High
Republic of South Africa	Loose and packaged	Moderate	Moderate
Singapore	No requirement		
Taiwan	No requirement		
Thailand	No requirement		
Other countries surveyed (17)			
Czech Republic	Packaged	High	Moderate
Egypt	Loose and packaged	High	Very high
European Union	Loose and packaged		
Austria		Very high	Very high
Denmark		Very high	Moderate
Finland		High	Moderate
Germany		High	High
Greece		Very high	Very high
Ireland		Very high	Very high
Italy		High	High
Portugal		High	High
Sweden		High	Moderate
Hungary	Loose and packaged	^a	Moderate
Israel	No requirement		
Russia	Loose and packaged	Moderate	Moderate
Switzerland	Loose and packaged	Very high	Very high
United Arab Emirates	No requirement		
Venezuela	No requirement		

(Table notes on next page)

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U.S. Trading Partners That Require
Country-Of-Origin Labeling for Fresh
Produce and the Scope of Their
Requirements

Source: GAO survey

^aAgricultural attaches were uncertain about this information.

^bRequirements for labeling loose produce are provincial government requirements and do not include all Canadian provinces.

^cRequirements currently apply to broccoli, taro, garlic, ginger, wet shitake mushrooms, edible burdock, asparagus, field peas, and onions. According to U.S. Department of Agriculture correspondence, labeling of all produce at the retail level will be required in Japan beginning April 1, 2000.

Note: The European Union requires country-of-origin labeling for loose and packaged fresh produce.

Information on Outbreaks of Illnesses Related to Fresh Produce

Table II.1 provides information on the 98 outbreaks of produce-related illnesses that were identified between 1990 and 1998 by the Centers for Disease Control and Prevention (CDC). Contamination may occur when fresh produce is grown, harvested, washed, sorted, packed, transported, or prepared. As the table shows, food safety officials could not identify the source of the contamination in 86 of these cases. Food safety experts believe that there is not sufficient information to assess the relative safety of fresh produce from the United States and foreign countries.

Table II.1: Outbreaks Associated With Fresh Produce in the United States Reported to CDC, 1990-98

Year	Country of origin	Implicated ^a commodity	Pathogen	Cause of contamination
1998	United States (California)	Alfalfa sprouts	<u>Salmonella</u> Senftenberg	Contaminated seed.
	Unknown	Mangos	<u>Salmonella</u> Oranienberg	Unknown.
	Unknown	Fruit salad	<u>E. coli</u> O157:H7	Unknown.
	United States	Cabbage (cole slaw)	<u>E. coli</u> O157:H7	Unknown; field contamination suspected.
	Unknown	Lettuce	<u>E. coli</u> O157:H7	Unknown.
	United States or Canada	Cabbage (cole slaw)	<u>E. coli</u> O157:H7	Unknown; field contamination suspected.
	United States	Alfalfa sprouts	<u>E. coli</u> O157:H7	Contaminated seed.
	United States	Alfalfa sprouts	<u>Salmonella</u> Havana; <u>Salmonella</u> Cubana	Contaminated seed.
	Mexico	Parsley	<u>Shigella sonnei</u>	Unknown; wash water or ice for packing suspected.
1997	Unknown	Melons or lemon bars	<u>E. coli</u> O157:H7	Unknown; cross contamination by food handlers suspected.
	United States (Idaho)	Alfalfa sprouts	<u>E. coli</u> O157:H7	Contaminated seed.
	United States (Kansas and Missouri)	Alfalfa sprouts	<u>Salmonella</u> Infantis; <u>Salmonella</u> Anatum	Contaminated seed.
	Guatemala	Raspberries	<u>Cyclospora cayetanensis</u>	Unknown; nonpotable water ^b may have been used in pesticide spray mix.
	Unknown	Mesclun lettuce (baby lettuce)	<u>Cyclospora cayetanensis</u>	Unknown.
	Unknown	Basil	<u>Cyclospora cayetanensis</u>	Unknown.
	Unknown	Lettuce salad	<u>Shigella sonnei</u>	Unknown; food handler suspected.
	United States	Salad	<u>Salmonella</u> Enteritidis	Cross contamination from turkey.

(continued)

**Appendix II
Information on Outbreaks of Illnesses
Related to Fresh Produce**

Year	Country of origin	Implicated^a commodity	Pathogen	Cause of contamination
	Unavailable	Red cabbage in vinegar	Unknown	Unavailable.
1996	United States (California)	Alfalfa sprouts	<u>Salmonella</u> Montevideo; <u>Salmonella</u> Meleagridis	Contaminated seed.
	Unknown	Lettuce	<u>E. coli</u> O157:H7	Unknown.
	Guatemala	Raspberries and blackberries	<u>Cyclospora</u> cayetanensis	Unknown; nonpotable water ^b may have been used in pesticide spray mix.
	United States (California)	Mesclun mix (baby lettuce mix)	<u>E. coli</u> O157:H7	Unknown; contamination in the field suspected.
	Unavailable	Lettuce	Unknown	Unavailable.
	Unavailable	Salad	Unknown	Unavailable.
	Unavailable	Green salad	Unknown	Unavailable.
	Unavailable	Green salad	Unknown	Unavailable.
	Unavailable	Tossed salad	Unknown	Unavailable.
1996-95	Imported (country-of-origin unknown)	Alfalfa sprouts	<u>Salmonella</u> Newport	Contaminated seed.
1995	Unknown	Salad or sandwich	<u>E. coli</u> O157:H7	Unknown.
	Unknown	Caesar salad	<u>E. coli</u> O157:H7	Unknown; food handler suspected.
	Unknown	Unknown (produce suspected)	<u>Cyclospora</u> cayetanensis	Unknown.
	Imported (country-of-origin unknown)	Alfalfa sprouts	<u>Salmonella</u> Stanley	Contaminated seed.
	United States (Idaho)	Romaine lettuce or red cabbage	<u>E. coli</u> O157:H7	Cross contamination with raw meat product during preparation.
	United States (Montana)	Leaf lettuce	<u>E. coli</u> O157:H7	Unknown; field contamination likely but unsanitary handling practices at the grocery store may have also occurred.
	United States	Iceberg lettuce	<u>E. coli</u> O157:H7	Cross contamination from ground beef.
	Unavailable	Lettuce	Norwalk-like virus	Unavailable.
	United States	Salad	<u>Salmonella</u> Enteritidis	Contaminated by asymptomatic food handler.
	Unavailable	House salad	Unknown	Unavailable.

(continued)

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Information on Outbreaks of Illnesses
Related to Fresh Produce**

Year	Country of origin	Implicated^a commodity	Pathogen	Cause of contamination
1994	Unknown	Cole slaw or soup	<u>E. coli</u> O157:H7	Unknown.
	Unknown	Potato salad	<u>E. coli</u> O157:H7	Unknown.
	Unknown	Salad bar	<u>E. coli</u> O157:H7	Unknown; cross contamination with raw ground beef suspected.
	Unknown	Lettuce	<u>E. coli</u> O157:H7	Unknown; food handler suspected.
	Mexico	Green onions	<u>Shigella flexneri</u> 6	Unknown; contamination at harvest suspected.
	Unknown	Fruit salad	<u>Campylobacter jejuni</u>	Unknown; cross contamination suspected.
	Unavailable	Pineapple	<u>E. coli</u> O11:H43	Unavailable.
	Unknown	Lettuce	<u>Salmonella</u> Thompson	Unknown; food handler suspected.
	Unavailable	Salad bar	Viral	Unavailable.
	Unavailable	Tossed salad	Unknown	Unavailable.
	Unavailable	Greens (edible fern fronds)	Unknown	Unavailable.
	Unavailable	Strawberries	Unknown	Unavailable.
	Unavailable	Salad bar	Unknown	Unavailable.
	Unavailable	Spring salad	Unknown	Unavailable.
	Unavailable	Tossed salad	Unknown	Unavailable.
1993	United States (South Carolina)	Tomatoes	<u>Salmonella</u> Montevideo	Unknown; wash water suspected.
	Unavailable	Sliced watermelon	<u>Salmonella</u> Javiana	Unavailable.
	Unknown	Vegetable salad	<u>E. coli</u> O157:H7	Unknown; cross contamination suspected.
	Unknown	Salad bar, lettuce or cheese	<u>E. coli</u> O157:H7	Unknown.
	Unknown	Cantaloupe from buffet	<u>E. coli</u> O157:H7	Unknown; cross contamination suspected.
	United States	Salad (carrots)	Enterotoxigenic <u>E. coli</u> (ETEC)	Unknown; contaminated carrots suspected.
	United States	Tabouleh salad (carrots)	Enterotoxigenic <u>E. coli</u> (ETEC)	Unknown; contaminated carrots suspected.
	Unavailable	Melon and strawberries	<u>Campylobacter jejuni</u>	Unavailable.
	Unknown	Carrot and celery sticks	Hepatitis A	Unknown; food handler suspected.
	Unknown	Lettuce	<u>Salmonella</u> Heidelberg	Unknown; foodhandler or cross contamination suspected.

(continued)

**Appendix II
Information on Outbreaks of Illnesses
Related to Fresh Produce**

Year	Country of origin	Implicated^a commodity	Pathogen	Cause of contamination
	Unavailable	Green salad	<u>Salmonella</u> Infantis	Unavailable.
	Unavailable	Muskmelon and honeydew	Unknown	Unavailable.
	Unavailable	Green beans or okra	Unknown	Unavailable.
1992	United States	Vegetable	<u>E. coli</u> O157:H7	Unknown; manure in home garden suspected.
	Unavailable	Salad	Unknown	Unavailable.
	Unavailable	Tossed salad	Unknown	Unavailable.
	Unavailable	Tossed salad	Unknown	Unavailable.
	Unavailable	Fruit salad	Unknown	Unavailable.
	Unavailable	Green salad	Unknown	Unavailable.
1991	United States (Texas) and Mexico	Cantaloupe	<u>Salmonella</u> Poona	Unknown; contamination in field suspected.
	Unavailable	Salad bar	Hepatitis A	Unavailable.
	Unavailable	Fresh fruit	<u>Giardia</u> lambia	Unavailable.
	United States (Florida)	Watermelon	<u>Salmonella</u> Javiana	Unknown; improper handling (temperature abuse) suspected.
	Unavailable	Tossed salad	Unknown	Unavailable.
	Unavailable	Tossed salad	Unknown	Unavailable.
	Unavailable	Fruit	Unknown	Unavailable.
	Unavailable	Cantaloupe	Unknown	Unavailable.
	Unavailable	Spring salad	Unknown	Unavailable.
	Unavailable	Salad	Unknown	Unavailable.
1990	Central America and Mexico	Cantaloupe	<u>Salmonella</u> Chester	Unknown; possible contamination from ice used in shipping.
	Unknown	Alfalfa sprouts	<u>Salmonella</u> Anatum	Unknown.
	Unavailable	Lettuce	Hepatitis A	Unavailable.
	United States (South Carolina)	Tomatoes	<u>Salmonella</u> Javiana	Unknown; wash water suspected.
	Unavailable	Salad bar	<u>Giardia</u> lambia	Unavailable.
	Unavailable	Salad	<u>Salmonella</u> Montevideo	Unavailable.
	Unknown	Raw vegetables	<u>Giardia</u> lambia	Unknown.
	Unavailable	Salad bar	Unknown	Unavailable.
	Unavailable	Lettuce	Unknown	Unavailable.
	Unavailable	Lettuce salad	Unknown	Unavailable.
	Unavailable	Salad bar	Unknown	Unavailable.
	Unavailable	Tossed salad	Unknown	Unavailable.

(continued)

**Appendix II
Information on Outbreaks of Illnesses
Related to Fresh Produce**

Year	Country of origin	Implicated^a commodity	Pathogen	Cause of contamination
	Unavailable	Lettuce	Unknown	Unavailable.
	Unavailable	Green salad	Unknown	Unavailable.
	Unavailable	Salad	Unknown	Unavailable.
	Unavailable	Fruit cup	Unknown	Unavailable.

Note: CDC obtains reports of outbreaks primarily from state and local health departments. "Unavailable" describes information not reported to CDC. "Unknown" describes information that CDC and state and local health departments did not determine.

^aThe information implicating fresh produce as the source of contamination is not necessarily conclusive for all of the outbreaks shown in the table.

^bWater unsuitable for drinking.

Source: Preliminary data from CDC.

Objectives, Scope, and Methodology

As requested by the Senate and House conferees for the Omnibus Consolidated and Emergency Supplemental Appropriations Act, 1999,¹⁸ we reviewed a number of issues associated with the potential costs and benefits of a mandatory labeling requirement. Specifically, this report provides information on (1) the potential costs associated with compliance and enforcement of a mandatory country-of-origin labeling requirement at the retail level for fresh produce, (2) the potential trade issues associated with such a requirement, (3) the potential impact of such a requirement on the ability of the federal government and the public to respond to outbreaks of illness caused by contaminated fresh produce, and (4) consumers' views of country-of-origin labeling. Finally, appendix I identifies U.S. trading partners that have country-of-origin labeling requirements for fresh produce, the nature and scope of those requirements, and the record of U.S. challenges to those requirements.

To determine the potential costs associated with compliance and enforcement, we interviewed officials and reviewed documents from USDA's Agricultural Marketing Service and the Foreign Agricultural Service; the U.S. Customs Service; the Food and Drug Administration; and the International Trade Commission. We also interviewed officials from the Food Marketing Institute and the Florida Retail Federation and visited several Florida groceries—both large chains and small independent stores—to examine how imported produce is labeled and how inspections are conducted. We interviewed officials from the United Fresh Fruit and Vegetable Association; the Food Industry Trade Coalition, which included representatives from the Food Distributors International, the National Grocers Association, ConAgra, Inc., the Chilean Fresh Fruit Association, the National Fisheries Institute, the Meat Importers Council of America Inc., the American Food Institute, and the National Food Processors Association; the Fresh Produce Association of the Americas; the Florida Fruit and Vegetable Association; the Northwest Horticultural Council; the Western Growers Association; and Chiquita Brands, Inc. To determine compliance and enforcement with state labeling laws, we interviewed officials from agricultural departments in Maine, Texas, and Florida.

To determine the potential trade implications, we reviewed documents and interviewed officials from the Office of the U.S. Trade Representative, the Foreign Agricultural Service, the Department of State, and the World Trade Organization. We also examined international trade agreements.

¹⁸Conference Report 105-825 accompanied H.R. 4328, which became the Omnibus Consolidated and Emergency Supplemental Appropriations Act, 1999 (P.L. 105-277, Oct. 21, 1998).

To identify U.S. trading partners that have country-of-origin labeling requirements for fresh produce, we reviewed the survey conducted by the Foreign Agricultural Service, 1998 Foreign Country of Origin Labeling Survey, February 4, 1998. In addition, we developed a questionnaire to determine the nature and scope of other countries' labeling requirements, which the Service sent electronically to the U.S. embassy agricultural attachés for 45 countries. Twenty-eight of the countries were selected because they are the countries with whom we import or export significant dollar volumes of fresh produce. The remaining 17 countries we surveyed were included because they were identified as requiring country-of-origin labeling in the Foreign Agricultural Service's 1998 survey. We received responses for 45 countries. The survey was conducted in February and March 1999.

To determine the potential impact on the federal government's and consumers' ability to respond to outbreaks of illness from fresh produce, we interviewed officials and obtained documents from the CDC, FDA, the U.S. Department of Agriculture, and Florida's Department of Health. We also discussed these issues with consumer groups.

To determine the potential impact of mandatory country-of-origin labeling on consumers, we reviewed the Tariff Act of 1930 and related regulations and rulings and discussed these issues with Customs officials. We also examined documents and interviewed officials with consumer groups, including the National Consumers League, the Center for Science in the Public Interest, and the Safe Food Coalition. We also analyzed the results of eight consumer surveys conducted from 1990 to 1998 to determine consumer opinions regarding mandatory country-of-origin labeling. The surveys were identified by industry experts and through literature searches. For the data we included in our report, we obtained frequency counts, survey instruments, and other documents, in order to review the wording of questions, sampling, mode of administration, research strategies, and the effects of sponsorship. We used only data that we judged to be reliable and valid.

Five surveys, conducted between 1990 and 1998, represented households nationwide that have purchased fresh produce in the past year. These surveys were published by Vance Publishing Corporation for The Packer newspaper and were published in its annual supplement, Fresh Trends. Another nationwide survey was conducted by the Charlton Research Group in 1996 for the Desert Grape Growers League. Two surveys of

Appendix III
Objectives, Scope, and Methodology

Florida consumers were conducted by the University of South Florida's Agriculture Institute in 1997 and the University of Florida in 1998.

We also spoke with officials and obtained documents from CDC, FDA, the U.S. Department of Agriculture's Agricultural Marketing Service, Florida's Department of Health, the Environmental Working Group, and Consumers Union about the relative safety of imported and U.S. produce.

We conducted our review from November 1998 through March 1999 in accordance with generally accepted government auditing standards.

Major Contributors to This Report

Erin Lansburgh, Assistant Director
Beverly A. Peterson, Evaluator-in-Charge
Daniel F. Alspaugh
Erin K. Barlow
Shirley Brothwell
Richard Burkard
Daniel E. Coates
Oliver Easterwood
Fran Featherston
Alice Feldesman
Paul Pansini
Carol Herrnstadt Shulman
Janice M. Turner

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