

United States  
Department of  
Agriculture

Animal and  
Plant Health  
Inspection  
Service

March 2015



Initial Regulatory Flexibility Analysis

Proposed Rule  
APHIS 2014-0092

RIN 0579-AE17

Fresh Lemon from Argentina

Policy & Program Development

Policy Analysis & Development

## Summary

This analysis examines potential economic impacts for small entities of a proposed rule that would allow the importation of fresh lemon from a region in northwest Argentina into the continental United States. A systems approach to pest risk mitigation would provide phytosanitary protection against pests of quarantine concern. Economic effects of the rule for both U.S. producers and consumers are not expected to be significant. While producers' welfare would be negatively affected, welfare gains for consumers would outweigh producer losses, resulting in a net benefit to the U.S. economy.

Commercial lemon production takes place in California and Arizona. For the 2013/14 season, lemon-bearing acres totaled 54,500 (California 46,000, Arizona 8,500). In the same season, the value of U.S. production of lemons was \$647 million, 92 percent earned by California's growers and 8 percent by Arizona's growers. Over the five seasons, 2008/09 to 2012/13, U.S. fresh lemon production averaged about 497,350 metric tons (MT) per year. Over the same period, annual imports averaged about 45,751 MT and exports averaged about 95,574 MT. Because of the provisions of the rule, we expect that most lemons would be exported between April 1 and August 31, a period that coincides roughly with the months in which U.S. lemon exports are declining and imports are increasing.

Effects of the proposed rule are estimated using a partial equilibrium model of the U.S. lemon sector. Annual imports of fresh lemon from Argentina are expected to range between 15,000 and 20,000 MT, with volumes averaging 18,000 MT. Quantity, price and welfare changes are estimated for these three import scenarios.

If the United States were to import 18,000 MT of fresh lemon from Argentina and there were no displacement of lemon imports from other countries, the price would decrease by an

estimated 4 percent. Consumer welfare gains of about \$25 million would outweigh producer welfare losses of about \$22 million, resulting in a net welfare gain of about \$3 million. The 15,000 MT and 20,000 MT scenarios show similar effects.

More reasonably, partial import displacement would occur, and price and welfare effects would be proportional to the net increase in U.S. lemon imports. If one-half of the quantity of fresh lemon imported from Argentina were to displace U.S. fresh lemon imports from elsewhere, then for the 18,000 MT scenario the price decline would be about 2 percent; consumer welfare gains and producer welfare losses would be about \$12.2 million and \$10.9 million, respectively, yielding a net welfare benefit of about \$1.3 million.

The majority of businesses that may be affected by the proposed rule are small entities, including lemon producers, packers, wholesalers, and related establishments. APHIS welcomes informed public comment in order to better determine the extent to which U.S. small entities may be affected by this proposed rule.

## Table of Contents

Summary .....	i
Introduction.....	1
Production and Trade of Lemon by the United States and Argentina.....	2
U.S. Lemon Production and Trade.....	2
Argentina Lemon Production and Trade .....	3
Expected Benefits and Costs of the Rule .....	5
The Baseline and Modeling Assumptions .....	5
Results .....	8
Benefits.....	12
Costs.....	12
Reasons Action is Being Considered.....	12
Objectives of and Legal Basis for the Rule .....	13
Potentially Affected Small Entities .....	13
Projected Reporting, Recordkeeping, and Other Compliance Requirements.....	17
Duplication, Overlap, or Conflict with Existing Rules and Regulations.....	17
Alternatives to minimize Significant Economic Impacts of the Rule .....	17
References.....	18

## Introduction

APHIS received a request from Argentina to allow the importation of fresh lemon (*Citrus limon* (L.) Burm. F.) fruit from northwest Argentina into the continental United States. In response to this request, APHIS' division of Plant Protection and Quarantine prepared a pest risk assessment and risk management document.<sup>1,2</sup> APHIS proposes to allow the importation of lemon into the continental United States under a systems approach described in the risk management document that would provide phytosanitary protection against pests of quarantine concern.<sup>3</sup> The proposed rule is consistent with our commitment under the International Plant Protection Convention to allow the importation of plants and plant products subject to the least restrictive measures that ensure phytosanitary security.

This document examines the potential economic effects of the proposed rule on small entities, as required by the Regulatory Flexibility Act. This Act requires agencies to evaluate the potential effects of their proposed and final rules on small businesses, small organizations and small governmental jurisdictions. In the following sections of the Introduction, we provide an overview of production and trade of fresh lemon by the United States and Argentina, followed by

---

<sup>1</sup> USDA. 2014. Risk Assessment for the Importation of Fresh Lemon (*Citrus limon* (L.) Burm. F.) Fruit from Northwest Argentina into the continental United States. Animal and Plant Health Inspection Service, Center for Plant Health Science and Technology, Plant Epidemiology and Risk Analysis Laboratory, Raleigh, NC.

<sup>2</sup> USDA. 2014. Importation of Fresh Lemon (*Citrus limon* (L.) Burm. F.) from Northwest Argentina into the Continental United States, Risk Management Document. Animal and Plant Health Inspection Service, Plant Health Programs, Regulatory, Permits and Manuals, Riverdale, MD.

<sup>3</sup> FAO, "International Standards for Phytosanitary Measures (ISPM) No. 14, The use of integrated measures in a systems approach for pest risk management 2002," [http://www.acfs.go.th/sps/downloads/16210\\_ISPM\\_14\\_E.pdf](http://www.acfs.go.th/sps/downloads/16210_ISPM_14_E.pdf) According to FAO-ISPM No 14, the systems approach is "the integration of different pest risk management measures, at least two of which act independently, and which cumulatively achieve the appropriate level of phytosanitary protection." Updates (January 8, 2014) <https://www.ippc.int/publications/use-integrated-measures-systems-approach-pest-risk-management>, and other ISPMs relevant to the proposed rule are: No. 1 (Principles of plant quarantines as related to international trade), No. 2 (Guidelines for pest risk analysis), No. 8 (Determination of pest status in an area), No. 12 (Guidelines for phytosanitary certificates), No. 20 (Guidelines for a phytosanitary import regulatory system), and No. 28 (Phytosanitary treatments for regulated pests).

a discussion of expected benefits and costs of the rule as estimated using a partial equilibrium model.

## Production and Trade of Lemon by the United States and Argentina

### **U.S. Lemon Production and Trade**

Lemons are among the most popular fresh fruits consumed in the United States. Lemon juice, rind, and zest are used in a variety of foods and drinks. In the 2012/13 crop year, U.S. per capita consumption of fresh lemon was about 3.4 pounds, up from 2.6 pounds in 1992.<sup>4</sup> In 2012, lemons generated \$430 million in cash receipts, about 2 percent of the \$26 billion in cash receipts for fruits overall.<sup>5</sup>

Commercial lemon production in the United States takes place in California and Arizona. For the 2013/14 season, lemon bearing acres totaled 54,500 (California 46,000, Arizona 8,500). California yields stood at 413 boxes per acre, while Arizona produced 212 boxes per acre.<sup>6</sup> In the same season, the value of U.S. production of lemons was \$647 million, 92 percent earned by California's growers and 8 percent by Arizona's growers. The marketing season for California runs from August to July (year-round) and for Arizona, from September to March.

Over the five production seasons, 2008/09 to 2012/13, fresh lemon output averaged about 524,110 metric tons (MT). Over the same period, imports averaged about 45,751 MT and exports averaged about 95,574 MT (table 1).

The main export markets for U.S. fresh lemon over the period 2010/11 to 2012/13 are Canada (35 percent), Japan (31 percent), South Korea (9 percent), and Hong Kong and China (6

---

<sup>4</sup> USDA, Economic Research Service. Imports Contribute to Year-Round Fresh Fruit Availability,

<sup>5</sup> USDA, Economic Research Service. Fruit and Tree Nuts, Table A-8: U.S. Cash Receipts 1980 to date.

<sup>6</sup> A box weighs approximately 80 pounds.

percent each). For the 2012/13 season, fresh lemon exports were valued at approximately \$135 million.

Table 1: U.S. fresh lemon production, imports, and exports, 2008/09 to 2012/13, metric tons

Year	Production	Imports	Exports
2008/09	482,623	41,713	90,713
2009/10	439,201	41,903	90,314
2010/11	545,372	43,029	99,862
2011/12	594,374	57,426	91,456
2012/13	558,984	44,695	105,526
Average	524,110	45,751	95,574

Source: USDA, Economic Research Service, Fruit and Tree Nuts, Table G16: Supply and Utilization 1981 to date.

Mexico is the largest supplier of lemon to the United States, with a 59 percent share from 2010/11 to 2012/13 (table 2). Chile's share was 37 percent over this same period, and much smaller quantities were imported from Spain, New Zealand and the Dominican Republic, among other countries. For the 2012/13 season, fresh lemon imports were valued at approximately \$39 million.

Table 2: Sources of fresh lemon imports by the United States, 2010/11 to 2012/13, metric tons

Country	2010/11	2011/12	2012/13	Three-Year Average	Percentage Share
Mexico	25,798	30,285	28,877	28,320	58.55
Chile	15,050	24,803	14,287	18,047	37.31
Spain	854	1,510	389	918	1.90
New Zealand	294	264	424	327	0.68
Dominican Republic	466	172	210	283	0.58
Others	551	373	494	472	0.98
Total	43,013	57,408	44,680	48,367	100

Source: USDA, Economic Research Service, Fruit and Tree Nuts, Data by Commodity, Lemons. Due to rounding, quantities in tables 1 and 2 may not match.

### Argentina Lemon Production and Trade

Lemon production in Argentina is concentrated in the northwest of the country, with approximately 90 percent produced in the Province of Tucumán (table 3). In the 1980s,

Argentina's lemon industry expanded significantly when sugar farms were converted to citrus production. For the 2010/11 to 2012/13 seasons, lemon trees were cultivated on approximately 120 acres. This area of production is expected to remain largely unchanged.

Table 3: Argentina's lemon production, by province, metric tons, 2013

Province	Metric Tons
Tucuman	1,306,000
Salta	77,984
Jujuy	42,100
Corrientes	35,000
Entre Rios	15,000
Misiones	7,059
Formosa	1340
Buenos Aires	800
Chaco	360
Catamarca	250
Total	1,485,893

Source: The Argentine Citrus Industry, 2013 (La Actividad Citricola, Argentina, 2014).

From 2009 to 2013, Argentina's lemon production averaged 1,447,000 MT (table 4). About 80 percent of Argentina's lemon production is consumed domestically, fresh or processed. The remaining 20 percent is exported as fresh fruit. In 2012, European Union countries received 71 percent of Argentina's lemon exports and Russia 16 percent (table 5).

Table 4: Argentina lemon production, consumption and exports, 2009-2013, 1,000 metric tons,

Year	Production	Consumption (Fresh and processed)	Exports (Fresh)
2009	1,425	1,172	253
2010	1,113	854	259
2011	1,756	1,512	244
2012	1,456	1,184	272
2013	1,485	1,202	283
Average	1,447	1,185	262

Source: The Argentine Citrus Industry, 2013 (La Actividad Citricola, Argentina, 2014).



Table 5: Destination of Argentina’s Lemon exports, 2012

Destination	Exports	Share
EU Countries	192,256	70.56
Russia	43,991	16.15
All Others	36,207	13.29
Total	272,454	100.00

Source: The Argentine Citrus Industry, 2013 (La Actividad Citricola, Argentina, 2013).

Table 6 compares fresh lemon production and export levels for Argentina and the United States. Argentina produced 21 percent of the world’s lemon production, 2009-2013. For that same period, the United States produced 8 percent of total world production. Argentina exported 17 percent and the United States 6 percent of the world’s lemon exports over this five-year period.

Table 6: Fresh lemon production and exports by Argentina and the United States, 2009-2013, 1000 metric tons

		2009	2010	2011	2012	2013	Average
Production		1,000 Metric Tons					
	Argentina (Percent)	1,426 (21)	1,113 (19)	1,756 (27)	1,456 (19)	1,486 (21)	1,447 (21)
	United States (Percent)	483 (7)	439 (7)	545 (8)	594 (8)	559 (8)	524 (8)
	World	6,844	5,911	6,489	7,468	7,133	6,769
Exports		1,000 Metric Tons					
	Argentina (Percent)	254 (14)	260 (18)	244 (16)	272 (17)	283 (18)	263 (17)
	United States (Percent)	91 (5)	90 (6)	100 (7)	91 (6)	105 (7)	96 (6)
	World	1,854	1,475	1,501	1,606	1,569	1,601

Source: The Argentine Citrus Industry, 2013 (La Actividad Citricola, Argentina, 2014).  
 USDA, Economic Research Service, Fruit and Tree Nuts, Data by Commodity, Lemons.

## Expected Benefits and Costs of the Rule

### The Baseline and Modeling Assumptions

For this analysis, we use a non-spatial, net trade, partial equilibrium approach to welfare analysis to compute expected impacts of the proposed rule on U.S. producers and consumers of fresh lemon. In this section, we describe assumptions and parameters of the welfare analysis,

including the baseline price and quantities, projected imports from Argentina, and domestic price elasticities of demand and supply. We then discuss the modeling results. The model evaluates how domestic market prices and quantities may adjust to the proposed policy change, and how producers and consumers may potentially be impacted.

We assume that demand and supply functions are approximately linear near the initial equilibrium point. For small parallel shifts in supply and demand, this assumption results in reasonably accurate measures of consumer and producer surplus changes. Lemon imports from Argentina would affect prices and quantities of fresh lemon on the U.S. market, and therefore result in welfare impacts as reflected in changes in consumer and producer surplus. Consumer surplus is the difference between what the consumer pays for a unit of a good or service and the maximum price that the consumer would be willing to pay for that unit. Producer surplus is the difference between the price a producer is paid for supplying a unit of a good or service and the minimum price that the producer would be willing to accept to supply that unit.

Our analysis is non-spatial in that the price and quantity effects obtained from the model are assumed to be average effects across geographically separate markets. Partial equilibrium means that the model results are based on maintaining a commodity-price equilibrium in a limited portion of the overall economy. All other economic sectors not explicitly included in the model are assumed to have a negligible influence on the model results. A partial equilibrium analysis is appropriate because the proposed rule is specific to imports of fresh lemon from Argentina and is therefore expected to have only limited effects on other sectors of the economy.

Baseline data for fresh lemon are shown in table 7. Baseline quantities are based on five-year averages for 2008/09 through 2012/13. Domestic supply is equated to fresh production minus exports, where fresh lemon exports are set equal to zero. In a net trade model, such as the

one applied in this analysis, a country is identified as either a net exporter or a net importer of a particular commodity. In this instance, U.S. fresh lemon exports are not included as part of domestic supply in the baseline in order to quantify the effects of permitting fresh lemon imports from Argentina, even though the United States is a net exporter of lemons. Domestic demand for fresh lemons is equated to fresh production less exports plus imports. The baseline price is the five-year average U.S. custom import value for fresh lemons, 2008/09 through 2012/13.<sup>7</sup>

Table 7: U.S. fresh lemon baseline data: production, imports, exports, domestic consumption, and price, 2008/09 to 2012/13

Season	Production (MT)	Imports (MT)	Exports (MT)	Domestic Consumption (MT) <sup>1</sup>	Domestic Price <sup>2</sup> (\$/MT)
2008/09	482,623	41,703	90,713	433,613	1,523
2009/10	439,201	41,903	90,314	390,790	1,137
2010/11	545,372	43,029	99,862	488,540	1,321
2011/12	594,374	57,426	91,456	560,344	1,020
2012/13	558,984	44,695	105,526	498,153	1,251
Baseline Data (5-year average)	524,110	45,751	95,574	474,287	1,250

Sources: Production, imports, and exports: USDA Economic Research Service; domestic price: USDA National Agricultural Statistics Service.

<sup>1</sup> Domestic consumption is production plus imports less exports.

<sup>2</sup> Custom import value.

For this analysis, we use price elasticities of demand and supply for fresh lemons of -0.50 and 0.50, respectively.<sup>8</sup> In the short run, lemon producers' responsiveness is inelastic due to limitations in adjusting supply to market changes (given the years required before newly planted trees are fully productive). In the long run, producers are better able to respond to changes in

---

<sup>7</sup> The custom import value is defined as the price actually paid or payable for merchandise when sold for exportation, excluding import duties, freight, insurance, and other charges incurred in bringing the merchandise to the importing country.

<sup>8</sup> Sumner D. A. and F. H. Buck. (Eds.). (2003). *Exotic Pest and Diseases: Biology and Economics for Biosecurity*. Iowa State Press.

price. Likewise, a more price-elastic long-run demand is indicative of increased price responsiveness of consumers over time.

## Results

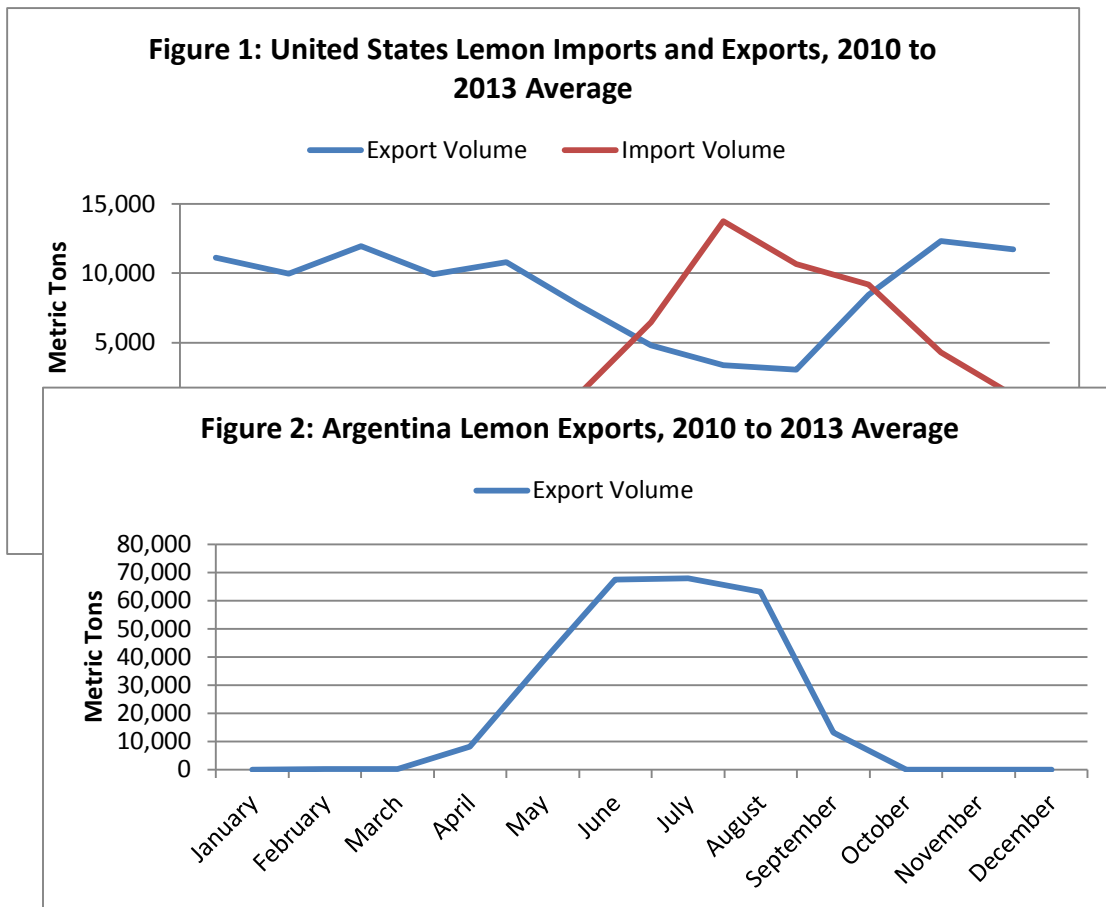
Argentina’s fresh lemon exports to the United States are expected to range from 15,000 MT to 20,000 MT, with 18,000 MT the most likely quantity. This range and most likely quantity are based on Argentina’s historical level of lemon exports.

For each of the three annual import levels, 15,000, 18,000, and 20,000 MT, we derive changes in U.S. consumption, production, price, consumer welfare, producer welfare, and net welfare (table 8). In each case, consumer welfare gains outweigh producer welfare losses, with positive net welfare impacts. Producer welfare losses under the three import levels range between \$18 million and \$24 million, which is equivalent to less than 4 percent of the value of U.S. lemon production. Consumer welfare gains range between \$20 million and \$27 million, with net welfare gains of between \$2 million and \$3 million. The price of fresh lemons is estimated to decline by 4 percent if 18,000 MT of fresh lemons were imported annually from Argentina.

Table 8: Impacts for U.S. fresh lemon production, consumption, price, and consumer and producer welfare, assuming fresh lemon imports from Argentina of 15,000, 18,000, and 20,000 metric tons and no displacement of lemon imports from current sources

Imports of fresh lemon from Argentina, MT	15,000MT	18,000 MT	20,000 MT
Change in U.S. consumption, MT	7,875	9,450	10,500
Change in U.S. production, MT	-7,125	-8,550	-9,500
Change in domestic price, \$ per MT	(\$42.37)	(\$50.84)	(\$56.49)
Percentage change in domestic price	-3.29	-3.95	-4.39
Change in consumer welfare	\$20,429,880	\$24,555,891	\$27,313,979
Change in producer welfare	(\$18,183,696)	(\$21,784,210)	(\$24,177,845)
Annual net benefit	\$2,246,184	\$2,771,681	\$3,136,134

Some percentage of the lemons that would be imported from Argentina can be expected to partially displace lemons that would otherwise be imported from current sources (Chile and Mexico, in particular). U.S. lemon imports peak from July to October, when U.S. lemon exports are at their lowest levels (figure 1). Partial import displacement is all the more likely because the period during which we expect most lemons to be exported, from April 1 to August 31, coincides roughly with the months in which U.S. lemon imports from current sources are on the rise. Argentina’s lemon exports in recent years have begun in March and ended in October (figure 2). In contrast, U.S. lemon exports peak from November to May. With approximately 25 percent of U.S. lemon production exported, November to May is also the period when the U.S. lemon harvest likely peaks.



To illustrate changes in the modeled results that would result due to Argentine lemon displacing imports from other sources, we assume as an upper-bound that one-half of the imports from Argentina would displace other countries' imports. In other words, for the most likely import quantity, 18,000 MT, imports from other sources would decline by 9,000 MT and the net increase in U.S. fresh lemon imports with the rule would be 9,000 MT.<sup>9</sup>

The economic impacts given this level of displacement, as shown in table 9, would be essentially half as large as those shown in table 8. Producer welfare losses under the three import levels assuming 50 percent displacement would range between \$5.5 million and \$16.4 million, which is approximately 0.8 to 2.5 percent of the average value of U.S. fresh lemon production. Consumer welfare gains would range between \$6.1 million and \$18.4 million, and net welfare gains would be between \$600,000 and \$2 million.

For the 18,000 MT import scenario and 50 percent displacement, U.S. fresh lemon consumption would increase by 4,725 MT, U.S. production would decrease by 4,275 MT, and the domestic price of fresh lemons would decline by about 2 percent. Consumer welfare would increase by about \$12.2 million and producer surplus would decline by about \$10.9 million, yielding a net welfare benefit of about \$1.3 million. For the 15,000 MT and 20,000 MT import scenarios, the results are similar to that of the 18,000 MT import scenarios. Consumer welfare

---

<sup>9</sup> Displacement is calculated as a function of the excess supply of fresh lemons for Argentina and the excess demand for lemons by the United States, where displacement is equal to  $1 - \frac{\varepsilon}{\eta - \varepsilon}$ ,  $\varepsilon$  represents the excess supply elasticity and  $\eta$  represents the excess demand elasticity. This representation is derived from the trading relationship by taking the logarithmic differential of the excess supply equation and solving for the logarithmic change in excess supply. Trade creation is expressed as the change in excess supply divided by the change in fresh lemon imports from Argentina. Trade displacement is the remaining portion of imports from Argentina and is calculated as one minus trade creation.

would increase by \$10.1million and \$13.6 million, respectively with a net benefit of 1.0 and 1.4 million respectively.

Table 9. Impacts for U.S. fresh lemon production, consumption, price, and consumer and producer welfare, assuming 50 percent of fresh lemons imports from Argentina would displace imports from current sources

Imports of fresh lemon from Argentina, MT	15,000	18,000	20,000
Net increase in U.S. fresh lemon imports, MT	7,500	9,000	10,000
Change in U.S. consumption, MT	3,937	4,725	5,250
Change in U.S. production, MT	-3,563	-4,275	-4,750
Change in domestic FOB price, \$ per MT	(\$21.18)	(\$25.42)	(\$28.24)
Percentage change in domestic price	-1.65	-1.98	-2.20
Change in consumer welfare	\$10,173,237	\$12,217,893	\$13,582,851
Change in producer welfare	(\$9,129,582)	(\$10,946,442)	(\$12,156,005)
Annual net benefit	\$1,043,655	\$1,271,451	\$1,426,846

Displacement by less than 50 percent of the lemons imported from Argentina would result in economic effects closer to those shown in table 8. The lower the level of displacement of U.S. lemon imports from other countries, the larger the price change and the larger the welfare losses for producers and welfare gains for consumers. Welfare gains for consumers and welfare losses for producers also can be expected to be larger in the short run when supply is inelastic. Regardless of the extent of import displacement or the price elasticity of supply, benefits to consumers of allowing fresh lemon imports from Argentina would exceed costs to producers.

In the short run, the supply response of U.S. producers would be small, as the model indicates, given short-run production and supply constraints. In the longer run, U.S. producers may be more responsive to fresh lemon imports from Argentina, depending on the quantity and price of the imported lemons.

## Benefits

Imports of fresh lemons from Argentina would result in overall net welfare gains. Actual changes in import levels and effects on producer and consumer welfare would depend on a variety of factors. Imports from Argentina would help meet the demand for fresh lemons especially during the summer months when demand peaks. Argentina's production season is counter that of the United States. We anticipate that most lemons would be exported between April 1 and August 31, which is the period in which demand is highest and imports supplement domestic supply. Consumers would benefit from the additional supply of fresh lemons. Importers and distributors of fresh lemons from Argentina would also benefit from the new business opportunities, although lemon imports from Argentina may result in increased competition and partial displacement of current imports.

## Costs

As noted in previous sections, the United States relies on fresh lemon imports to augment supply, especially during the summer months. Argentina would ship lemons during this off-season when demand is high and U.S. production is low. The extent to which imports from Argentina would result in greater competition for U.S. producers and for current foreign suppliers would depend on several factors including the relative prices and the quantities shipped. Welfare losses for U.S. producers, as shown in tables 8 and 9, may range between \$11 million and \$22 million due to annual imports of 18,000 MT of fresh lemon from Argentina, depending on the extent to which these imports displace fresh lemon imports from other countries.

## Reasons Action is Being Considered

Argentina has requested access of commercial shipments of fresh lemon into the continental United States. APHIS has determined that the current prohibition on imports of fresh lemon from Argentina is unnecessary because the pest risks posed to U.S. agriculture can be



successfully mitigated using a systems approach prescribed in APHIS' risk management document for this proposed rule.

## Objectives of and Legal Basis for the Rule

The objective of the proposed rule is to allow the importation of fresh lemon into the continental United States from Argentina. The proposed rule would amend the current regulations found in Title 7 § 319.56 of the Code of Federal Regulations that set phytosanitary requirements for the importation of fruits and vegetables into the United States.

The legal basis for this action is the Plant Protection Act (7 U.S.C. 7701-7772), which authorizes the Secretary of Agriculture to prohibit or restrict the importation of any plant product if the Secretary determines that the prohibition or restriction is necessary to prevent the introduction of a plant pest or noxious weed into the United States. The proposed rule is part of a continuing program to allow the importation of foreign agricultural products that APHIS has determined are without significant risk of introducing pests or diseases into the United States, if appropriate mitigation measures are applied.

## Potentially Affected Small Entities

The entities potentially affected by the rule would be primarily U.S. producers of fresh lemon. Other stakeholders that may be affected include industries that support the production and distribution of fresh lemon in the United States, and importers of fresh lemon.

More specifically, entities potentially affected by the rule are classified within the following industries, according to the North American Industry Classification System (NAICS): Citrus Groves (except orange groves) (NAICS 111320), (Postharvest Crop Activities (except cotton ginning) (NAICS 115114), Fresh Fruit and Vegetable Merchant Wholesalers (NAICS 424480), Pesticide and Other Agricultural Chemical Manufacturing (NAICS 325320), Farm

Product Warehousing and Storage (NAICS 493130), Nursery and Tree Production (NAICS 111421), Fruit and Vegetable Markets (NAICS 445230), Packing and Crating (NAICS 488991), General Freight Trucking, local (NAICS 484110), and Wood Container and Pallet Manufacturing (NAICS 321920).

According to 2012 Census of Agriculture, there were a total of 3,007 lemon farms in the United States in 2012, up from 2,607 in 2007.<sup>10</sup> In the same year, a total of 2,839 farms produced citrus other than oranges as their primary product and were thus classified as Citrus Groves (except orange groves) (NAICS 111320).<sup>11</sup> Establishments classified within NAICS 11320 are considered to be small by the SBA standard of annual sales of not more than \$750,000. The average market value of crops sold by non-orange citrus groves in 2012 was about \$223,000, which is well below the small-entity standard.

Establishments classified within Postharvest Crop Activities (except cotton ginning) (NAICS 115114) are considered to be small by the SBA standard of annual sales of not more than \$27.5 million. This industry comprises establishments primarily engaged in performing services on crops subsequent to their harvest to prepare them for market or further processing, such as crop cleaning, sun drying, shelling, fumigating, curing, sorting, grading, packing, and cooling. The percentage of establishments that meet the SBA standard is not known; neither the Census of Agriculture nor the Economic Census reports revenue for these establishments. However, we note that available information on packinghouses indicates these entities are

---

<sup>10</sup> The number of citrus farms in the United States, as reported by the *2012 Census of Agriculture*, includes operations that produced citrus for processing as well as fresh utilization.

<sup>11</sup> The reported number of lemon farms exceeds the number of operations classified within NAICS 111320 because some lemon growers produce oranges or other citrus as their primary crop.

predominantly small. In 2010, there were 74 packinghouses in California.<sup>12</sup> Approximately 60 percent of these packinghouses market the final product through cooperatives such as Sunkist Growers, Inc., the Central California Orange Growers Cooperative, and DNE World Fruit Sales.<sup>13</sup> The remaining packinghouses market their final product independently.

Establishments classified within Fresh Fruit and Vegetable Merchant Wholesalers (NAICS 424480) are considered to be small by the SBA standard of not more than 100 employees. According to the 2012 Economic Census, there were 4,854 fresh fruit and vegetable merchant wholesalers in the United States with a total of 101,854 paid employees, for an average of 21 employees per business. It is likely that domestic fruit merchant wholesalers that may be affected by the rule are predominantly, if not entirely, small entities.

Establishments classified within Pesticide and Other Agricultural Chemical Manufacturing (NAICS 325320) are considered to be small by the SBA standard of not more than 500 employees. According to the 2012 Economic Census, there were 210 pesticide and other agricultural chemical manufacturers in the United States with a total of 10,075 paid employees. Of these 210 manufacturers, about 87 percent employed fewer than 100 people.

Establishments classified within Farm Product Warehousing and Storage (NAICS 493130) are considered to be small by the SBA standard of annual sales of not more than \$25.5 million. While complete data from the 2012 Economic Census is not yet available for this industry category, the 2007 Economic Census reports that there were 713 establishments, with about 48 percent reporting sales revenue of less than \$25.5 million.

---

<sup>12</sup> *California Citrus Mutual Report to the CDFA Board- June 30, 2010*. Bob Blakely, Director of Industry Relations. <[http://www.californiacitrusmutual.com/pdf/CDFA\\_Board\\_Report\\_6302010.pdf](http://www.californiacitrusmutual.com/pdf/CDFA_Board_Report_6302010.pdf)> Retrieved on: September 9, 2011.

<sup>13</sup> United States International Trade Commission (USITC), “Conditions of Competition for Certain Oranges and Lemons in the U.S. Fresh Market, Inv 332-469,” Publication 3863, Washington, D.C., July 2006.

Fruit and Vegetable Markets (NAICS 445230) are considered to be small by the SBA standard of annual sales of not more than \$7.0 million. According to the 2007 Economic Census, there were 3,314 fruit and vegetable market establishments in this category, and more than 92 percent had annual sales of less than \$5 million.

Nursery and Tree Production establishments (NAICS 111421) are considered to be small by the SBA standard of annual sales of not more than \$750,000. According to the 2012 Economic Census, there were 32,048 of these operations having average sales revenue of about \$221,000. Virtually all Nursery and Tree Production establishments are small entities.<sup>14</sup>

Establishments in Packing and Crating (NAICS 488991) are considered to be small by the SBA standard of annual sales of not more than \$25.5 million. According to the 2012 Economic Census, there were 1,432 packing and crating establishments in the United States with a total of 21,475 employees. Of these 1,432 establishments, approximately 93 percent reported revenues of less than \$25 million.

Establishments in General Freight Trucking, local (NAICS 484110) are considered to be small by the SBA standard of annual sales of not more than \$27.5 million. According to the 2012 Economic Census, there were 28,595 local general freight trucking establishments in the United States in 2012. Approximately 95 percent of these establishments reported revenues of less than \$25 million.

Establishments classified within Wood Container and Pallet Manufacturing (NAICS 321920) are considered to be small by the SBA standard of not more than 500 employees. According to the 2012 Economic Census, there were 2,666 wood container and pallet manufacturers in the United States with a total of 49,155 paid employees. Of the 2,666 wood

---

<sup>14</sup> U.S. 2007 Agriculture Census table 37  
[http://www.agcensus.usda.gov/Publications/2007/Full\\_Report/Volume\\_1,\\_Chapter\\_1\\_US/](http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_1_US/)

container and pallet manufacturers, 99.9 percent of the establishments in this category employed fewer than 500 people.

## Projected Reporting, Recordkeeping, and Other Compliance Requirements

Reporting and recordkeeping requirements associated with the proposed rule are discussed in the rule under the heading "Paperwork Reduction Act."

## Duplication, Overlap, or Conflict with Existing Rules and Regulations

APHIS has not identified any duplication, overlap, or conflict of the proposed rule with other Federal rules.

## Alternatives to minimize Significant Economic Impacts of the Rule

APHIS does not expect the proposed rule to have a significant economic impact on small entities. We have prepared this initial regulatory flexibility analysis because our understanding of possible economic effects of the rule on small entities may be incomplete. In the absence of apparent significant economic impacts, we have not identified alternatives that would minimize such impacts.

## References

Census of Agriculture, 2007,

[http://www.agcensus.usda.gov/Publications/2007/Full\\_Report/index.asp](http://www.agcensus.usda.gov/Publications/2007/Full_Report/index.asp)

Census of Agriculture, 2012, <http://www.agcensus.usda.gov/Publications/2012/>

Census Bureau, 2007, County Business Patterns and 2007 Economic Census. 2007 Annual Tabulations , <http://www.census.gov/econ/susb/data/susb2007.html>

Economic Census, 2012, County and Business Patterns (CBP) data.

<http://www.census.gov/econ/cbp/index.html>

[Economic Research Service, Fruit and Tree Nuts, Data by Commodity, Lemons:](http://ers.usda.gov/data-products/fruit-and-tree-nut-data/data-by-commodity-imports-and-exports.aspx?reportPath=/TradeR3/TradeTables&programArea=fruit&stat_year=2009&top=5&HardCopy=True&RowsPerPage=25&groupName=Citrus&commodityName=Lemons#Pd51210d4e46b416ab9d065403c0c69c1_2_292)

[http://ers.usda.gov/data-products/fruit-and-tree-nut-data/data-by-commodity-imports-and-exports.aspx?reportPath=/TradeR3/TradeTables&programArea=fruit&stat\\_year=2009&top=5&HardCopy=True&RowsPerPage=25&groupName=Citrus&commodityName=Lemons#Pd51210d4e46b416ab9d065403c0c69c1\\_2\\_292](http://ers.usda.gov/data-products/fruit-and-tree-nut-data/data-by-commodity-imports-and-exports.aspx?reportPath=/TradeR3/TradeTables&programArea=fruit&stat_year=2009&top=5&HardCopy=True&RowsPerPage=25&groupName=Citrus&commodityName=Lemons#Pd51210d4e46b416ab9d065403c0c69c1_2_292)

Small Business Administration. *A Guide for Government Agencies How to Comply with the Regulatory Flexibility Act.* <http://www.sba.gov/advo/laws/regflex.html>

Small Business Administration. *Small Business Standard Match to North American Industry Classification System* <http://www.sba.gov/size/sizetable2002.html>