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Final Regulatory Flexibility Analysis

Final Rule
APHIS 2014-0092

RIN 0579-AE17

Fresh Lemon from Argentina

Policy & Program Development

Policy Analysis & Development

Summary

This analysis examines potential economic impacts of a rule that will allow the importation of fresh lemon from a region in Northwest Argentina into the continental United States. A systems approach to pest risk mitigation will provide phytosanitary protection against pests of quarantine concern. Both U.S. producers and consumers will be affected by the rule. While producers' welfare will be negatively affected, welfare gains for consumers will outweigh producer losses, resulting in a net benefit to the U.S. economy.

Commercial lemon production takes place in California and Arizona. For the 2014/15 season, lemon-bearing acres totaled 55,300 (California 47,000, Arizona 8,300). In the same season, the value of U.S. production of lemons was $694 million. Over the production seasons, 2008/09 to 2014/15, U.S. fresh lemon production averaged 535,244 metric tons (MT) per year. Over the same period, annual imports averaged 49,995 MT and exports averaged 101,849 MT. Because lemons imported from Argentina that are harvested green between April 1 and August 31 will not require treatment for Medfly, we expect that most will be imported during this period, which coincides roughly with the months in which U.S. lemon exports are declining and imports are increasing.

Effects of the 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 imports 18,000 MT of fresh lemon from Argentina and there is no displacement of lemon imports from other countries, we estimate that the price (custom import value) of fresh lemon will decrease by about 4 percent. Consumer welfare gains of $22.4 million

will outweigh producer welfare losses of $19.9 million, resulting in a net welfare gain of $2.5 million. The 15,000 MT and 20,000 MT scenarios show similar effects.

More reasonably, partial import displacement will occur, and price and welfare effects will be proportional to the net increase in U.S. lemon imports. Assuming as an upper-bound that one-half of the quantity of fresh lemon imported from Argentina displaces U.S. fresh lemon imports from elsewhere, we estimate for the 18,000 MT scenario that the price decline will be about 2 percent; consumer welfare gains and producer welfare losses will be $11.1 million and $10.0 million, respectively, yielding a net welfare benefit of $1.1 million.

The majority of businesses that may be affected by the final rule are small entities, including lemon producers, packers, wholesalers, and related establishments.

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Introduction

The Regulatory Flexibility Act requires agencies to evaluate the potential effects of their proposed and final rules on small businesses, small organizations and small governmental jurisdictions. This final regulatory flexibility analysis describes expected impacts of this rule on small entities, as required by section 604 of the Act.

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' Plant Protection and Quarantine prepared a pest risk assessment and risk management document.[1,2] A proposed rule was published in the *Federal Register* on May 10, 2016.[3]

Importation of fresh lemon into the continental United States will be allowed under a systems approach that provides phytosanitary protection against pests of quarantine concern.[4] This 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.

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[1] USDA APHIS, 2015a. 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.
[2] USDA APHIS, 2015b. 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.
[3] https://www.regulations.gov/document?D=APHIS-2014-0092-0001
[4] 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 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).

The Regulatory Flexibility Act requires agencies to evaluate the potential effects of their proposed and final rules on small businesses, small organizations and small governmental jurisdictions. This final regulatory flexibility analysis describes expected impacts of this rule on small entities, as required by section 604 of the Act.

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 2014/15 crop year, U.S. per capita consumption of fresh lemon was 3.6 pounds, up from 2.6 pounds in 1992.[5] In 2015, lemons generated $694 million in cash receipts, less than 3 percent of the $30 billion in cash receipts for fruits and nuts overall.[6]

Commercial lemon production in the United States takes place in California and Arizona. For the 2014/15 season, lemon bearing acres totaled 55,300 (California 47,000, Arizona 8,300). California yields stood at 436 boxes per acre, up from 409 in the previous season, while Arizona produced 241 boxes per acre, up from 217 in the previous season.[7] The marketing season for California runs from August to July (year-round) and for Arizona, from September to March.

Over the seven production seasons, 2008/09 to 2014/15, fresh lemon output averaged 535,244 metric tons (MT). Over the same period, imports averaged 49,995 MT and exports averaged 101,849 MT (table 1).

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[5] USDA, Economic Research Service. Imports Contribute to Year-Round Fresh Fruit Availability; and Fruit and Tree Nuts, Table G16: Supply and Utilization 1981 to date.

[6] USDA, Economic Research Service. Farm Income and Wealth Statistics, Cash Receipts by Commodity, Fruit and Tree Nuts, U.S. Cash Receipts, 2010 to date: http://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics/cash-receipts-by-commodity.aspx. Retrieved on 08/22/2016.

[7] A box weighs approximately 80 pounds.

Table 1: U.S. fresh lemon production, imports, and exports, 2008/09 to 2014/15, metric tons

Year	Production	Imports	Exports
2008/09	482,627	41,692	90,688
2009/10	439,082	41,891	90,290
2010/11	545,224	43,018	99,835
2011/12	594,212	57,411	91,431
2012/13	558,984	44,683	105,497
2013/14	571,532	44,340	122,744
2014/15	555,203	76,932	112,459
Average	535,244	49,995	101,849

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

Mexico is the largest supplier of lemons to the United States, with a 58 percent share from 2010/11 to 2014/15 (table 2). Chile's share was 35 percent over this same period, with much smaller quantities imported from Spain and New Zealand, among other countries. For the 2014/15 season, fresh lemon imports were valued at approximately $74 million.

Table 2: Sources of fresh lemon imports by the United States, 2010/11 to 2014/15, metric tons

Country	2010/11	2011/12	2012/13	2013/14	2014/15	Five-Year Average	Percentage Share
Mexico	25,798	30,285	28,877	28,884	41,760	31,121	58
Chile	15,050	24,803	14,287	11,700	28,196	18,807	35
Spain	854	1,510	389	1,647	4,665	1,813	3
New Zealand	294	264	424	702	828	502	1
Others	1,017	545	704	1,403	1,179	970	2
Total	43,013	57,407	44,680	44,336	76,628	53,213	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.

The main export markets for U.S. fresh lemon over the period 2010/11 to 2014/15 were Japan (31 percent), Canada (30 percent), South Korea (11 percent), Hong Kong (9 percent) and China (6 percent). For the 2014/15 season, fresh lemon exports were valued at approximately $214 million.

Argentina Lemon Production and Trade

Lemon production in Argentina is concentrated in the Northwest of the country, with approximately 80 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 2014/15 seasons, lemon trees were cultivated on approximately 120,000 acres. This area of production is expected to remain largely unchanged.

Table 3: Argentina's lemon production, by province, metric tons, 2015

Province	Metric Tons
Tucumán	1,233,079
Salta	213,210
Jujuy	49,025
Entre Rios	16,500
Misiones	7,342
Corrientes	2,968
Formosa	1,340
Buenos Aires	900
Chaco	430
Catamarca	350
Total	1,525,144

Source: The Argentine Citrus Industry, 2016 (La Actividad Citricola, Argentina, 2016).

From 2009 to 2015, Argentina's lemon production averaged about 1.4 million MT (table 4). About 80 percent of Argentina's lemon production is consumed domestically, fresh and processed. The remaining 20 percent is exported as fresh fruit. In 2015, European Union countries received 70 percent of Argentina's lemon exports and Russia received 17 percent (table 5).

Table 4: Argentina lemon production, consumption and exports, 2009-2015, metric tons

Year	Production	Consumption (Fresh and Processed)	Exports (Fresh)
2009	1,425,000	1,172,000	253,000
2010	1,113,000	854,000	259,000
2011	1,756,000	1,512,000	244,000
2012	1,456,000	1,184,000	272,000
2013	1,485,000	1,202,000	283,000
2014	954,000	801,000	153,000
2015	1,525,144	1,181,716	185,264
Average	1,365,000	1,121,000	244,000

Source: The Argentine Citrus Industry, 2016 (La Actividad Citricola, Argentina, 2016).

Table 5: Destination of Argentina's lemon exports, metric tons, 2015

Destination	Exports	Percentage Share
EU Countries	122,886	70
Russia	29,194	17
All Others	22,219	13
Total	174,299	100

Source: The Argentine Citrus Industry, 2016 (La Actividad Citricola, Argentina, 2016).

Table 6 compares fresh lemon production and export levels for Argentina and the United States. Argentina produced 21 percent of the world's lemons, 2009-2015. For that same period, the United States produced 8 percent of the world total. Argentina exported 15 percent and the United States 6 percent of the world's lemon exports over this seven-year period.

Table 6: Fresh lemon production and exports by Argentina and the United States, 2009-2015, 1000 metric tons

		2009	2010	2011	2012	2013	2014	2015	Average
Production		1,000 Metric Tons							
	Argentina (percent of world)	1,425 (21)	1,113 (19)	1,756 (27)	1,456 (19)	1,486 (21)	954 (15)	1,525 (22)	1,388 (21)
	United States (percent of world)	483 (7)	439 (7)	545 (8)	594 (8)	559 (8)	571 (9)	555 (8)	535 (8)
	World	6,844	5,911	6,489	7,468	7,133	6,185	7,135	6,738
Exports		1,000 Metric Tons							
	Argentina (percent of world)	253 (14)	259 (18)	244 (16)	272 (17)	283 (18)	153 (10)	185 (11)	236 (15)
	United States (percent of world)	91 (5)	90 (6)	100 (7)	91 (6)	105 (7)	122 (8)	106 (6)	101 (6)
	World	1,854	1,475	1,501	1,606	1,569	1593	1,713	1,616

Sources: The Argentine Citrus Industry, 2016 (La Actividad Citricola, Argentina, 2016). USDA, Economic Research Service, Fruit and Tree Nuts, Data by Commodity, Lemons.

Overview of the Action and affected Entities

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 rule. Fresh lemon importers, producers, middlemen, and consumers are U.S. entities expected to be affected by the rule. Other stakeholders that may be affected comprise industries that support the production, distribution, and sale of fresh lemon.

This rule will amend 7 CFR 319.56 (Subpart—Fruits and Vegetables) to allow the importation of commercial fresh lemon consignments from Northwest Argentina, provided that Argentina employs a prescribed systems approach to mitigate the risks posed by quarantine

pests. The rule is consistent with World Trade Organization agreements that sanitary and phytosanitary regulatory restrictions should be based on scientific evidence and applied only to the extent necessary to protect human, animal, and plant health.

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 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 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 will 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 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 tab1e 7. Baseline quantities are based on five-year averages, 2010/11 through 2014/15. 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, 2010/11 through 2014/15.[8]

[8] 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.

Table 7: U.S. fresh lemon baseline data: production, imports, exports, domestic consumption, and price, 2010/11 to 2014/15

Season	Production (MT)	Imports (MT)	Exports (MT)	Domestic Consumption (MT) [1]	Domestic Price [2] ($/MT)
2010/11	545,224	43,018	99,835	488,540	1,321
2011/12	594,212	57,411	91,431	560,344	1,020
2012/13	558,984	44,683	105,497	498,153	1,251
2013/14	571,532	44,340	122,744	493,128	1,086
2014/15	555,203	76,932	112,459	519,676	1,189
Baseline Data (5-year average)	535,244	49,995	101,849	515,590	1,173

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

[1] Domestic consumption is production plus imports less exports.

[2] Custom import value.

For this analysis, we use price elasticities of demand and supply for fresh lemons of -0.50 and 0.50, respectively.[9] 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 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

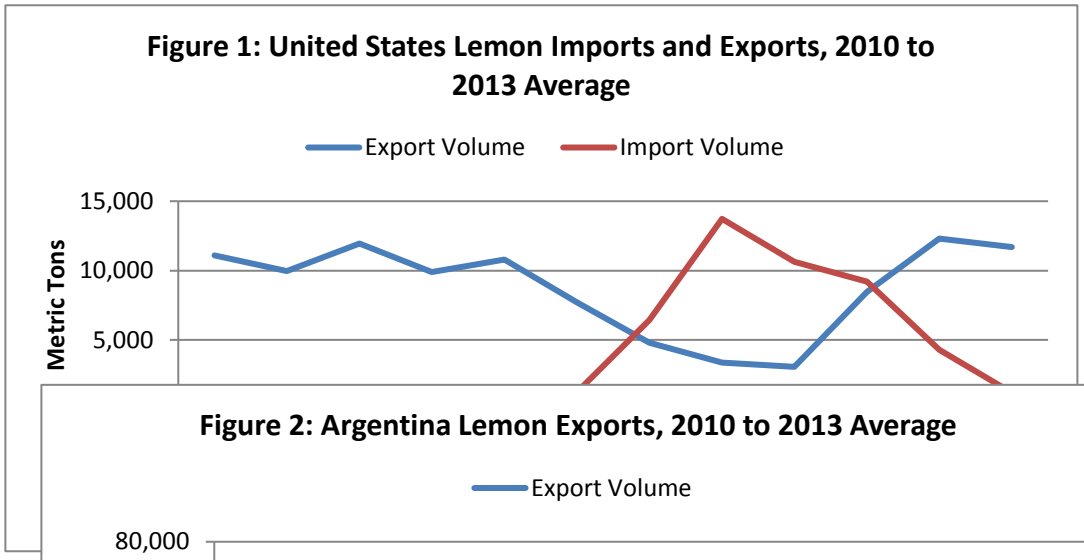
[9] Sumner, D.A. and F.H. Buck. (Eds.). (2003). Chapter 9 " Ex-ante economics of exotic disease policy: Citrus Canker in California", page 140. Exotic Pest and Diseases: Biology and Economics for Biosecurity, Iowa State Press.

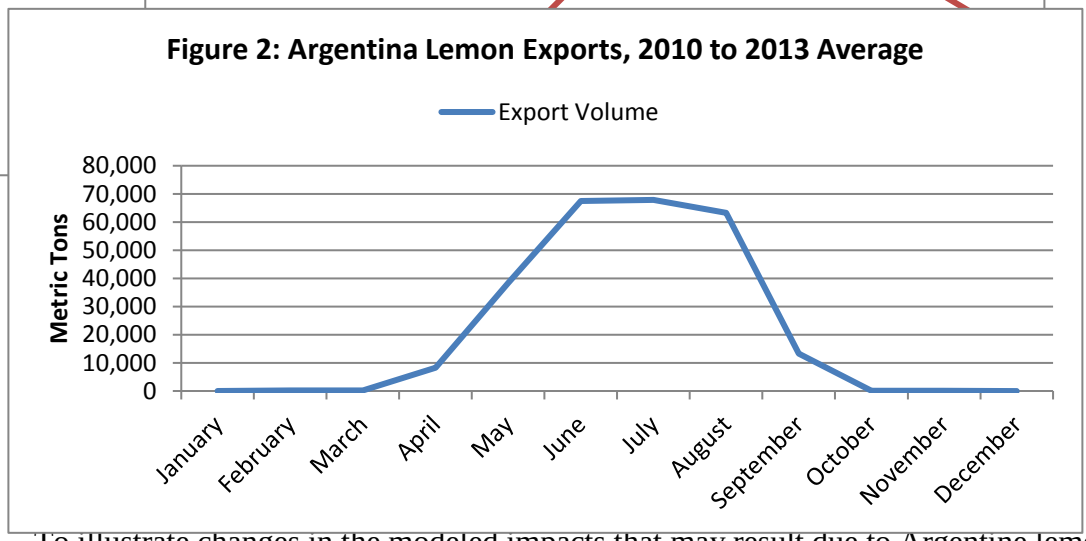
welfare (table 8). In each case, consumer welfare gains outweigh producer welfare losses, with positive net welfare impacts. Producer welfare losses under the three import levels range between $16.6 million and $22.1 million, which is equivalent to less than 4 percent of the value of U.S. lemon production for the 2014/15 season. Consumer welfare gains range between $18.6 million and $24.9 million, with net welfare gains of between $2.0 million and $2.8 million. The price of fresh lemons is estimated to decline by between 3 and 4 percent.

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

Assumed annual Fresh lemon imports from Argentina	15,000	18,000	20,000
Change in U.S. consumption, MT	7,869	9,443	10,492
Change in U.S. production, MT	-7,131	-8,557	-9,508
Change in domestic price of fresh lemons, dollars per MT	($35.81)	($42.98)	($47.75)
% Change in domestic price	-3.05	-3.66	-4.07
Change in consumer welfare	$18,605,971	$22,360,984	$24,870,589
Change in producer welfare	($16,605,048)	($19,895,412)	($22,083,313)
Annual net benefit	$2,000,923	$2,465,572	$2,787,276

Some percentage of the lemons that will 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 imported from Argentina, from April 1 to August 31, coincides roughly with the months in which U.S. lemon imports from current sources are also on the rise. Argentina's lemon exports globally 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 impacts that may 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 U.S. imports from other countries. In other words, for the most likely import quantity, 18,000 MT, we assume in this example, that imports from other sources decline by 9,000 MT and the net increase in U.S. fresh lemon imports with the rule totals 9,000 MT.[10]

[10] 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 $1-\frac{\varepsilon}{\eta-\varepsilon}$, ε represents the excess supply elasticity and η represents the excess demand elasticity. This representation is derived from the trading relationship

The economic impacts given this level of displacement, as shown in table 9, are essentially half as large as those shown in table 8. Producer welfare losses under the three import levels assuming 50 percent displacement range between $8.3 million and $11.1 million, which is approximately 1.2 to 1.6 percent of the average value of U.S. fresh lemon production. Consumer welfare gains range between $9.3 million and $12.4 million, and net welfare gains are between $0.9 million and $1.3 million.

For the 18,000 MT import scenario and 50 percent displacement, U.S. fresh lemon consumption will increase by 4,721 MT, U.S. production will decrease by 4,279 MT, and the domestic price of fresh lemons will decline by about 2 percent. Consumer welfare will increase by about $11.1 million and producer surplus will decline by about $10.0 million, yielding a net welfare benefit of about $1.1 million.

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 will 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	3,935	4,721	5,246
Change in U.S. production, MT	-3,565	-4,279	-4,754
Change in domestic price of fresh lemons, dollars per MT	($17.91)	($21.49)	($23.88)
% Change in domestic price	-1.53	-1.83	-2.03

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.

Change in consumer welfare	$9,267,758	$11,129,764	$12,372,668
Change in producer welfare	($8,334,447)	($9,993,675)	($11,098,408)
Annual net benefit	$933,311	$1,136,090	$1,274,260

Displacement by less than 50 percent of the lemons imported from Argentina will 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 will exceed costs to producers.

In the short run, the supply response of U.S. producers will 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 will result in overall net welfare gains. Actual changes in import levels and effects on producer and consumer welfare will depend on a variety of factors. Imports from Argentina will help meet the demand for fresh lemons especially during the summer months when demand peaks. We anticipate that most lemons will be imported between April 1 and August 31, which is the period in which demand is highest and imports supplement domestic supply. Consumers will benefit from the additional supply of fresh lemons. Importers and distributors of fresh lemons from Argentina will 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 is expected to ship lemons during this high demand season. The extent to which imports from Argentina will result in greater competition for U.S. producers and for current foreign suppliers will depend on several factors including the relative prices and the quantities shipped. Based on annual imports of 18,000 MT of fresh lemon from Argentina, welfare losses for U.S. producers may range between $10 million and $20 million (tables 8 and 9), depending on the extent to which these imports displace fresh lemon imports from other countries.

Final Regulatory Flexibility Analysis

The Regulatory Flexibility Act requires agencies to evaluate the potential effects of their proposed and final rules on small businesses, small organizations and small governmental jurisdictions. This final regulatory flexibility analysis describes expected impacts of this rule on small entities, as required by section 604 of the Act.

Need for and Objectives of the Rule

The objective of the rule is to allow the importation of fresh lemon into the continental United States from Argentina. This rule will amend the current regulations regarding lemon imports 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 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.

Significant Issues raised by Public Comment in response to the Initial Regulatory Flexibility Analysis

Comment: "Producers will not be happy about this bill being passed. Lemons being imported into the United States will introduce a new competitor…. This cuts down on their profits. [They are likely to] band together and try and sway people to shoot down this amendment."

Response: Lemons from Argentina will provide an additional source of lemons to meet the increased demand during the summer months. The results from our economic model indicate that a loss in producer surplus will be outweighed by the gain in consumer surplus, yielding a net welfare gain to society.

Comment: Exports to Asia constitute a large portion of domestic production.

Response: The main export markets for U.S. fresh lemon, 2011/12 to 2014/15, were Japan (31 percent), Canada (30 percent), South Korea (11 percent), Hong Kong (9 percent) and China (6 percent). On average, about 20 percent of U.S. fresh lemon production is exported.

Comment: "The U.S. has turned to imports to supplement its domestic supply and in 2015, imported 83,000 metric tons of lemons, mainly from Mexico and Chile."

Response: Per capita lemon consumption has been on an upward trend in recent years, with summer being the high-demand season. The United States relies on lemon imports from Mexico, Chile, and other countries to help meet this demand.

Comment: "This regulation is trying to amend a prior regulation that is causing a market failure for consumers…. The government has allowed the lemon producers in America to have the benefit of having very few opponents to sell their lemons. This has caused inflated prices as well as less efficiency…. Right now the lemon market has a barrier to trade for the people in Argentina. This barrier is the current regulations, which state that they cannot sell their lemons [within the United States.]"

Response: The rule is consistent with the WTO rules governing fair trade. With the new rule, lemon prices are expected to decline slightly.

Comment: "The first major benefit of having lemons being imported from Argentina is that the United States producers will need to become more efficient at producing lemons and use cheaper processes."

Comment: "Lemons sold on average for $2.12 [per pound, in June 2016]. This has been on account of a heavy drought, as well as new pests that have become a problem for farmers. Allowing the supply of lemons to increase will mean…the price will drop…. [This rule] will lead to competition. Producers will try to undercut their competition by lowering their prices and selling more goods."

Response: Competition has a positive impact on an industry's efficiency, encouraging innovation, and international competitiveness.

Comment: Argentina expects to export about 20,000 MT to the U.S. annually.

Response: The model used in our analysis considers a range of imports, with 20,000 metric tons at the upper end of the range.

Comment: "Further, access to the U.S. market will promote economic development in the northwest region of Argentina, one of the least developed areas of the country, where the lemon industry is the top employer."

Comment: "This will significantly reinforce the position of President Macri's Administration and its reformist stance, which has created so many positive prospects for our bilateral relationship and which was raised during President Obama's visit to Argentina."

Comment: "Argentina is a developing nation that, more than a decade later, is still in the process of negotiation the terms of its financial crisis and default that occurred in late 2000 and early 2001. Recent decisions from US courts have mandated that Argentina pay several of its bond holders the value of their holding in full, which would seriously strain Argentina's dollar reserves. Allowing Argentina to sell its produce to the United States would give them an opportunity to earn dollars, and rebalance their foreign exchange portfolio. As a nation focused mainly on agricultural, instead of value-added goods, Argentina relies on agricultural exports to build its supply of foreign exchange, mostly Euros, Chinese Yuan, and US dollars. In order for Argentine companies to earn these foreign currencies, they must have the ability to sell their goods and services in China, the EU, or the United States."

Response: Expected effects of the rule for Argentina's economic development are outside the purview of this analysis.

Comment: "As a foreign policy matter, it has been the goal of the Obama administration to improve relations with Latin American nations…. Finalizing this rule as proposed would represent a significant step forward in improving relations with our South American allies."

Response: This rule is in response to Argentina's request for market access. The decision to allow importation of fresh lemon from Argentina is based on science. APHIS expects the prescribed risk management measures will provide the appropriate level of phytosanitary protection against the pests of quarantine concern.

Comment: "Passage of this proposed rule would allow Argentina a place on the international roster to compete for this seasonal product during the April to August window when production of U.S. lemons is at its lowest point."

Response: Imports are highest in the summer months to meet the seasonal high demand. Imports of lemons from Argentina will help fill this seasonal gap.

Comment: "Exports to Asia consume a large volume of the lemons [produced domestically] leaving the market short during the months of June through September."

Response: While the majority of U.S. lemon exports are to Asian markets, they are lowest during the summer months.

Comment: "[The analysis] fails to note that exports decline not because production is low, but rather for the following two reasons: (1) late season lemons are not suitable for overseas shipment; and (2) there is brisk demand during the summer months, and shippers choose to market their fruit in the U.S. U.S. growers and shippers market more than one-third of domestic lemon sales in summer months."

Response: We note in the analysis that demand is highest during the summer season. Marketing decisions by U.S. producers serving domestic and overseas consumers are unlikely to be significantly altered by fresh lemon imports from Argentina.

Comment: "Why does USDA make the argument that Argentine lemon imports would be counter seasonal to California production? That is blatantly not true which causes me to wonder how much of the "scientific basis" is flawed as well."

Response: We acknowledge that California's fresh lemon production is year-round, and that California producers are able to store part of their fresh lemon production for sale during the

high-demand summer season. We expect fresh lemon imports from Argentina to also take place mainly during the summertime, when U.S. demand is highest.

Comment: "The California lemon production season is almost year round, sourcing product from different regions of the State. There is no off-season. Lemons are available year round to the consumer strictly from domestic production."

Response: Production is California is year-round, but domestic supplies are at their lowest during the summer months.[11]

Comment: "California and Arizona lemon producers are not seasonal producers. They produce lemons year round, with peak shipping seasons occurring from April through July, which is when Argentine lemons will arrive."

Response: As noted in the analysis, production is California is year-round running from August to July. During the summer months, U.S. producers are preparing for harvest and domestic supplies are at their lowest.[12]

Comment: "In reality Argentine lemons imported during this time will compete directly with the domestic market and at a time when both Arizona and California lemon harvest occurs. Arizona lemon harvest takes place from July through March and California harvest occurs from March through January. Inundating the U.S. with additional imported lemons at this time will drive down prices and jeopardize the viability of the U.S. lemon growers and the industry, especially in Yuma County."

Response: While fresh lemon imports from Argentina will compete with lemon produced domestically and imported from other countries, the expected impact for U.S. producers is not

[11] Perez, A. and S. Pollack, 2004: Fruit and Tree Nuts Outlook" E-Outlook, USDA-ERS, FTS-310.
[12] Ibid.

significant. APHIS does not foresee this rule jeopardizing the viability of the U.S. lemon industry.

Comment: "Today is the 10th of August and the US lemon market is currently flooded with District 3 storage shipments from the Sunkist Cooperative, Chilean imports on both coasts, Mexican lemons crossing through McAllen, Texas and Nogales, Arizona. Trading prices are falling due to the inability of the market to absorb this excess supply."

Response: Since November 2015, lemon prices have been the highest of the last five seasons.[13] Despite relatively stable production, grower prices have been 58 percent above the 5-year average each month through April.

Comment: "Also your economic analysis is very flawed as there is nothing [in the rule] to limit the volume they bring in - all lemons can be picked and shipped green [under the rule]. Please relook at your science and assumptions."

Response: Economic impacts of the proposed rule are based on the quantity of lemons expected to be imported from Argentina. The proposed rule would require the lemons from Argentina to be (i) harvested green, between April 1 and August 31, or (ii) treated for Medfly in accordance with 7 CFR part 305 and the operational workplan if harvested yellow or outside of that time period.

Comment: "The economic analysis regarding the impacts of the importation of lemons from Northwest Argentina did not consider that lemons can be harvested when still green and virtually shipped throughout the year."

[13] USDA ERS, Fruit and Tree Nuts Outlook No. (FTS-362), June 2016. http://www.ers.usda.gov/publications/fts-fruit-and-tree-nuts-outlook/fts-362.aspx

Response: Lemons from Argentina that are harvested green between April 1 and August 31 would be allowed to be imported without having been treated for Medfly. We expect most fresh lemon imports from Argentina to arrive during the summer months, when demand is highest.

Comment: "Another positive externality that will come from this regulation would be that shipping companies would have more business from increased trade. They would be in higher demand, allowing them to hire more people, as they will be trying to keep up with the volume of lemons that are being shipped from Argentina."

Response: Certain shipping companies and related businesses may be affected by the proposed rule, as is normal when there are changes in trade regulations.

Comment: "Lemons from Argentina would be an ideal cargo addition for the Delaware River tristate transportation sector. Increased activity for Delaware River ports equals jobs. Regional businesses such as restaurants and supermarkets stand to realize increased revenues from this cargo, as well."

Response: In regions where lemon imports from Argentina result in increased economic activity, retail businesses and other commercial interests will benefit indirectly from the proposed rule.

Comment: "Although this proposed rule more than satisfies the definition of Significant regulatory action, APHIS has declined to undertake…analyses [that must be prepared for significant actions]. Sunkist urgently asks either that APHIS correct this error or OMB independently determine that the rule require these assessments."

Response: OMB designated the proposed rule as not significant. Our analysis was consistent with this designation.

Comment: "In addition, the Department should deem this proposed rule to be economically significant under Executive Order 12866."

Comment: "The proposed rule should be reviewed by the Office of Management and Budget and designated economically significant."

Response: Under Executive Order 12866, this decision is made by the Office of Management and Budget, not USDA.

An economically significant designation is based on a determination that the rule may have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities. Neither OMB nor APHIS have reason to believe such impacts may occur.

Comment: "APHIS's economic analysis applies arbitrary assumptions regarding Argentine lemon exports, market demand, prices and the negative economic impact the proposed rule will have on local communities that rely on citrus production "

Response: The analysis is based on economic theory and cited sources of information. Impact of the proposed rule are estimated for U.S. lemon producers and consumers overall. Data used in the analysis were obtained from credible sources.

Comment: "The arbitrary, erroneous, and incomplete data underlying the economic analysis, PRA, and RMD have seriously misstated the adverse consequences of according access…."

Response: The data used in the analyses are neither arbitrary nor erroneous, but rather are based on sound sources.

Comment: "Sunkist strenuously opposes this proposal until USDA…has completed the economic assessments mandated by Section 6(a)(3)(c) of Executive Order 12866, and has allowed the U.S. industry…adequate time to review and submit public comments…on the requisite 6(a)(3)(c) economic assessment."

Response: The introductory text of Section 6(a)(3)(c) clearly states that it applies only to Significant rules. The proposed rule was designated Non-significant by OMB.

Comment: "Under 5 U.S.C. (603)(c), Agencies are required to consider alternative regulatory proposals. The fact that APHIS fails to identify even a single alternate proposal illustrates that is has not even attempted to grasp the scope of the impact of the proposed rule. Consideration of alternative proposals is particularly critical in light of the grossly disproportionate impact on small entities."

Response: Based on available information, we find it unlikely that the rule will have a significant impact on a substantial number of entities, and therefore have not identified alternatives to the rule.

Comment: USCSC also notes a flaw in virtually every economic analysis prepared and issued by APHIS with respect to a potential new citrus import to the U.S. market. Specifically, APHIS only addresses the import request at hand, instead of preparing a programmatic analysis. USCSC submits that a programmatic analysis is needed and is in fact essential. At the current time, there are requests pending from several countries to export citrus to the U.S. market…and there are indications China may be considering a request in the future…. The potential volume of new products on the U.S. market from the combined total of all of the import requests listed will pose an economic challenge of a far greater dimension than any one of those requests does individually. APHIS must take into account combined total impact."

Response: APHIS responds to market requests as they are received. Economic effects are estimated under expected market conditions, including imports from other countries. Our economic analyses cannot include conjecture about future trade that at present is not allowed.

Comment: "The industry commissioned a recent study which estimates the impact of authorizing Argentine lemon imports could range from $183 to $261 million."

Comment: "Even if Argentina, a sophisticated exporter, shipped only a small amount of its total lemon production (1.6 - 2.3 million cartons) to the United States, that volume would negatively impact the U.S. economy and lemon sector by $183 to $261 million."

Comment: "The Arizona State University study should be reviewed and incorporated."

Comment: "On the issue of economic impact, as confirmed by the U.S. industry's exhaustive economic-impact study, the proposed rule will have a negative economic impact on the U.S. economy in the range of 180-260 and only de minimis benefit to US consumers…. The industry's study proves that if Argentina sends just 1.6 million cartons of its lemon production to the United States, as the Argentine industry has publicly confirmed it intends to do, the resulting negative economic impact on the US economy will exceed $180 million. This includes all forms of economic effects—direct, indirect, and induced—associated with those lemon imports…. If Argentina ships just 2.7 percent of lemon production to the United States…that volume will have a negative impact in excess of 260 million."

Response: A study commissioned by the U.S. lemon industry entitled "Economic Impacts of Importing Fresh Argentine Lemons into the United States: Report, Findings, and Conclusions," by Albert Kagan and Ignacio Molina, was received by USDA in January 2015. This is the study referred to by the comments above. The results of this study indicate that near-term losses to the U.S. lemon sector and U.S. economy by allowing the importation of fresh

lemon from Argentina would range from $183 million to $261 million. We note the following, in response to comments that on the proposed rule that reference this study.

Quantity imported. The quantities of fresh lemon Kagan and Molina assume would be imported from Argentina under three import scenarios range from about 28,000 metric tons (MT) to about 40,000 MT per year.[14] To some extent, fresh lemon imported from Argentina would displace imports from existing sources (Chile, Mexico, Spain, and New Zealand). Kagan and Molina include import displacement in their analysis, reducing the range of the net increase in imports to approximately 14,000 to 21,000 MT, that is, approximately one-half of the quantity assumed would be imported from Argentina.[15]

The APHIS pest risk assessment and risk management document for the rule project annual imports from Argentina of about 18,000 MT.[16]The quantity is based on Argentina's historical export levels with the assumption that 10 percent will be exported to the United States. Based on this quantity, we assume in our economic analysis that lemon imports from Argentina would range from 15,000 to 20,000 MT. As do Kagan and Molina, we estimate that up to 50 percent of lemon imports from Argentina may displace imports from elsewhere, yielding a net increase in the U.S. fresh lemon supply of between 7,500 and 10,000 MT.

As noted on page 10 of the Kagan and Molina study, "[Argentina's] fresh lemon exports have declined 29 percent from 2008 to 2013. This has occurred while total production levels

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[14] The quantities are reported in 38.5-pound cartons: 1.6 million, 1.9 million, and 2.3 million cartons, or 27,951, 31,434, and 40,166 MT.

[15] Specifically, for the three import scenarios, the increase in fresh lemon imports total 14,219 MT, 17,130 MT, and 21,079 MT.

[16] USDA APHIS, 2015a. 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.
USDA APHIS, 2015b. 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.

have increased 9 percent." Our more modest range for the net increase in lemon imports (7,500 to 10,000 MT after partial displacement of imports from current sources) is supported by rising producer costs and an over-valued Argentine peso. Argentinian harvest is estimated to decline by 20 percent while demand has risen sharply by about 30 percent. The decline in exports is due to a decline in harvest that was damaged by extreme weather.[17]

Impact on U.S. demand. The Kagan and Molina study assumes that an increased U.S. lemon supply would not affect the price of lemon for U.S. consumers. In other words, it assumes that the decline in price would be fully borne by U.S. producers as a decline in cash receipts. As stated on page 44: "For the most part per capita consumption of fresh lemons is relatively flat therefore any increase in the supply side of lemons will not generate any increased consumption. There is not evidence available to indicate that consumer level prices will decline based on any market power studies. Lemons are an inelastic good."

The above passage would seem to conflate two assumptions: that an increase in fresh lemon supply would have no effect on the retail price; and consumers would be unresponsive if there were a change in the retail price of fresh lemon. However, lemon prices at the consumer level are affected by supply, even if not significantly. Schnepf (2013) examined farm-to-food dynamics (price transmission) and determined that fresh lemon as with other citrus fruits has a relatively low average farm share of the retail price (16 percent), whereas handling and shipping costs are substantial components of the retail price[18]. Also, the price elasticity of demand for fresh lemon (the degree to which consumers respond to a price change) is not large, but neither is

[17] Fresh Plaza, July 11, 2016, "Overview of the global lemon market." www.freshplaza.com/print.asp?id=160513

[18] Schnepf, R., 2013. "Farm-to-Food Price Dynamics." Congressional Research Service, report for Congress.

it zero, as indicated by the following elasticity estimations: Baldwin and Jones (2013), -0.742; Sumner and Buck (2003), -0.50; Russo et al. (2008), -0.34; and Knutson (1978), -0.21.[19]

The one-sided conclusions of the Kagan and Molina study – that there would be large costs to the U.S. lemon industry and economy by allowing lemon imports from Argentina – rest on the assumption that U.S. lemon consumers would remain unaffected by the regulatory change. As modeled by Kagan and Molina, imports from Argentina would harm U.S. producers but not benefit U.S. consumers.

Use of IMPLAN. Kagan and Molina include indirect and induced effects in addition to direct effects in arriving at the large costs that would be borne by the U.S. lemon industry and economy due to fresh lemon imports from Argentina. By their measure, the direct costs to the lemon industry would range from $66 million to $95 million. The total (direct, indirect, and induced) effects, as determined using IMPLAN simulations, range from $183 million to $261 million.

Inclusion of indirect and induced effects in an analysis of expected economic impacts is a matter of methodological choice. It is an approach that takes into account economy-wide effects, but the results need to be carefully interpreted, especially when considering an entire industry. Input-output models such as IMPLAN emphasize the production side of the economy. They use input-output multipliers as summary measures for predicting the total impact on all industries in

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[19] Baldwin K. L. and K. Jones, 2013, U.S. Citrus Import Demand: Seasonality and Substitution, Journal of International Food and Agribusiness Marketing, 25:1, 24-41
Sumner, D.A. and F.H. Buck. (Eds.). (2003). Chapter 9 "Ex-ante economics of exotic disease policy: Citrus Canker in California", page 140. Exotic Pest and Diseases: Biology and Economics for Biosecurity, Iowa State Press.
Russo C., R. Green and R. Howin, 2008. "Estimation of supply and demand elasticities of California commodities." Working paper 08-001. University of California, Davis. http://ageconsearch.umn.edu/bitstream/37629/2/08-001a.pdf
Knutson, C., August 1978. "Demand Relationship for California Tree Fruits, Grapes, and Nuts: A Review of Past Studies." Giannini Foundation,

an economy of changes in the demand for the output of one industry. It is important to realize that multipliers show average effects, not marginal effects. Economies of scale, unused capacity, and technological change are not taken into account.

The fact that the Kagan and Molina study assumes no impact on consumers prevents consideration of broader economic effects on the demand side of allowing fresh lemon imports from Argentina. Too often, use of input-output models such as IMPLAN may simply provide a convenient means of arriving at large costs based on multiplier effects, without an acknowledgement of its limitations.

Argentina's current lemon export markets. Kagan and Molina highlight difficulties that Argentina is having with its major foreign markets, the EU and Russia. Recently, Russia has banned lemons from the EU and as a result, Argentina has gained access to the Russian fresh lemons market.[20]

Model specification. In terms of modelling structure, ordinary least squares (OLS) estimates are determined by Kagan and Molina for a simultaneous equation system. They do not report measures that would support the statistical validity of the results, such as confidence levels, t-stats, and R-square values. In addition, most equations in the system had an "accuracy adjustment variable" which is not explicitly defined.

Comment: "Producer losses under the APHIS economic analysis does not seem to include all the negative impacts associated with the importation of Argentine lemons. One factors not considered in the analysis is the termination of jobs in the lemon industry. Growers, packing houses, and other ancillary businesses alike would cut back on the number of employees

[20]Argentinian lemons arrive in Russia thanks to the EU veto http://www.freshplaza.com/article/163548/Argentinian-lemons-arrive-in-Russia-thanks-to-the-EU-veto

as the domestic market share of lemons dwindles. Yuma County already has one of the highest unemployment rates in the country at 24.3% and this proposal would only serve to make this number worse."

Response: The model used in our economic analysis considers the direct impacts on producers and consumers in terms of producer and consumer surplus. We do acknowledge that there may be indirect impacts associated with the proposed rule.

Comment: "Another area of concern regarding the economic analysis is whether the costs of APHIS's work with the national plant protection organization of Argentina and onsite monitoring were included. These costs are not trivial and would ultimately be borne by the U.S. taxpayer. The available supporting documents do not indicate whether these costs were considered in the economic analysis and reflected in the net benefits."

Response: Work with other countries' NPPOs and onsite monitoring is critical to APHIS decisions regarding the sufficiency of systems approaches to pest mitigation. APHIS' engagement with countries that propose to export commodities of concern to the United States, as well as with countries that are already exporting, is an ongoing activity of the Agency and is not included in the economic analysis for specific rulemaking.

Comment: "In the past two decades there have been a myriad of proposals allowing citrus into the United States during alleged "off-season" shipment periods. The USDA economic team has repeatedly stated insufficient or minimal impacts. Why? Because they assess total citrus tonnage ignoring that the majority of Florida tonnage went for processing whereas most of the imported product was destined for fresh consumption. The result has been the demise of the California summer orange program."

Response: The economic analysis for this rule is based on the supply and demand for fresh lemon and does not include data on processed lemon.

Comment: "Realistic assumptions for how much we can expect Argentina to ship to the U.S. should be the basis of the economic analysis…. Argentina produces 90 million cartons of lemons while the U.S. produces 42 million cartons. Argentina ships on average 7 million cartons of lemons to the European Union."

Comment: "USDA assumes Argentina will ship just less than a million cartons of lemons to the US. Argentina is facing increased competition and economic slowdowns in their key export markets - Europe, Russia and Asia. Foreign investments are supporting more lemon production in Argentina. The Argentine Government has said it stands ready to export 16.5 million cartons. The US is one of the most attractive and lucrative markets in the world for their lemons. Yet USDA assumes they will only export just less than a million cartons to the US. Mexico, a producer twenty times smaller than Argentina exports 2 million cartons to the US."

Comment: "USDA's analysis assumes Argentina will ship only 992,079 cartons to the United States, which is less than Argentina's own industry has said it will ship in just the first year after the rule takes effect. As Jose Carbonell of the Argentine Citrus Federation confirmed, the Argentine industry 'aims to start off with prudent volumes, perhaps between 1.1 million and 1.7 million cartons, so as not to generate any adverse reaction from our California counterparts."

Comment: "USCSC believes that nowhere in the proposed rule nor its supporting documents does APHIS give sufficient consideration to what may be the potential pest risk or economic impact from ever-increasing volumes of Argentine lemons…. In this context, it is important to recognize that there has been significant growth in the volume of Chilean and

Mexican imports of lemons over the years. The data from 1998 reflects that approximately 6000 MT arrived from those two countries. By 2015, the volume had grown to 76000 MT."

Response: 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.

Comment: Argentina expects to export about 16.5 million cartons to the U.S. annually.

Response: The quantity 16.5 million cartons is the total volume of Argentina lemon exports to all markets. The commenter either mistook that quantity for the expected level of lemon exports to the United States, or mistakenly expects that all of Argentina's lemon exports will be diverted to the United States.

Comment: "According to Bureau of Labor statistics, Americans paid an average of $2.12 per lemon in June 2016. This was one of the highest-paid fruits for the month, behind grapes and strawberries."

Response: The Bureau of Labor Statistics price is per pound, not per lemon. To the extent that fresh lemon imports from Argentina add to the U.S. supply during periods of peak demand, they will help to moderate consumer prices.

Comment: "Argentina does not compete with U.S. wages…. This will not be an issue at first but will over time."

Response: The commenter assumes farmworker compensation will be a primary determinant of import price of lemons from Argentina. Handling and shipping costs are usually a closer indicator of the price to consumers.

Comment: "Argentina has a comparative advantage over the United States in terms of producing lemons. This means Argentina can produce lemons for a cheaper cost."

Response: Whether or not Argentina has a comparative advantage over the United States in terms of lemon production is immaterial to this rule. We have evaluated effects of the rule for U.S. entities in terms of expected import quantities, expected effects on lemon prices, and expected changes in lemon production and consumption in response to price changes.

Comment: "The price differential between fresh lemons in the United States and Argentina remains significant.

Response: Our analysis of expected economic impacts of the rule is based on the import price of fresh lemons.

Comment: The general perception is that retail food prices are 'sticky'— that is, retail prices follow commodity prices upward rapidly, but fall back only slowly and partially when commodity prices recede."

Response: We agree that price "stickiness"—the tendency of prices to remain constant despite declines in the cost of producing and selling a product—is commonly observed.

Comment: "A 2 to 4 cent decrease in the cost of lemons sometime during the year means very little."

Response: The importation of lemon imports from Argentina is expected to result in a net benefit to the economy as a result of a relatively small decline in price.

Comment: "The demand for lemons is not the same as other fruit. The lemon consumption does not increase nor decrease correspondingly with the fall or rise in its price. The lemon demand is reliant on other uses such as lemonade and with seafood. This…should be applied to the economic analysis."

Response: All uses of lemon sold fresh are included in the economic analysis. The model used to examine expected impacts of importation of lemons from Argentina is a net trade model

that is based on the aggregated demand for fresh lemon. The price elasticity of demand used in the model, -0.5, reflects the low responsiveness of the demand for fresh lemon to changes in its price.

Comment: "USDA has created this misconception that Argentine lemon imports will reduce prices, increase consumer demand and all growers will benefit. It pays no attention to expert and USDA supported data that clearly shows lemons are a product with an inelastic demand; therefore reductions on price will not proportionally increase consumption."

Response: We use a price elasticity of demand estimate of -0.5; for a one-percent decrease in the price of fresh lemon, we expect a one-half-percent increase in demand.

Comment: "Contrary to USDA's assumption, lemon prices are highly inelastic, meaning any increase in the supply of lemons will not increase consumption of reduce prices at retail. Argentine imports will simply supplant U.S. lemons without decreasing prices or increasing demand…. USDA's NASS found that price elasticity of lemons is only -.3, thereby confirming that lemons are much less responsive to price reductions than other major citrus varieties, including oranges and grapefruit. USDA's analysis for the proposed lemon rule disregards that lemon-specific figure and arbitrarily uses instead a general number based on the demand characteristics of all fresh fruit (-.5) without explaining why this general number is appropriate for lemons."

Response: The price elasticity of demand estimate of -0.5 is specific to lemons, based on analysis in Sumner and Buck (2003).[21] Both elasticities are within the inelastic range.

[21] Sumner, D.A. and F.H. Buck. (Eds.). (2003). Chapter 9 "Ex-ante economics of exotic disease policy: Citrus Canker in California", page 140. Exotic Pest and Diseases: Biology and Economics for Biosecurity, Iowa State Press.

Comment: "USDA also appears to have assumed that all Argentine imports of lemons will go directly to consumers. Only 30 percent of fresh lemons are sold directly to consumers, with the remaining 70 percent going to the food service and other bulk users for use in meals and drinks. These institutional and bulk buyers do not pass on cost savings to consumers."

Response: Regardless of whether the buyer is an individual or an institution, welfare gains will be realized.

Comment: One of the benefits of allowing more lemons to be imported into the United States would be a rise in supplementary goods such as sugar, as well as substitute sugars, beverages, and cups…. By allowing more lemons to be introduced to the market, demand for supplementary goods should also rise."

Response: In theory, the sale for complementary goods (the commenter's "supplementary goods") may increase if fresh lemon sales increase, but numerous other factors also will influence any changes in demand for fresh lemon complements.

Comment: "[Increased demand for supplementary goods] will be very beneficial to grocery stores and restaurants, as they will be able to sell more of these goods because of the lower prices of the lemon, as well as the consumers that are benefitted by the lower price of the lemon itself."

Response: As described in the economic analysis, consumers of fresh lemon are expected to benefit because of the rule, but not significantly. Sales of complementary goods may increase because of the rule, but also insignificantly.

Comment: "[The rule] will lead to a price competition. This will cause the lemons to go through an unequal phase, which will mean that prices will continue to drop until the producers will drop out [of the market] because the prices will not be enough for them."

Response: The market for a good such as fresh lemon is largely stable, but subject to price fluctuations because of near-term variations in supply and demand. Longer-term trends in price and market competitiveness may lead to firms entering or exiting the industry. Industry participation and whether lemon imports from Argentina increase or decrease in the longer-term would depend on the competitive market forces that shape supply and demand.

Comment: "I would add that the benefit to US consumers from APHIS' recent efforts to increase the importability of Mexican avocadoes has been realized very quickly…. Industry data has shown that the total volume of Hass avocadoes for sale in the United States has increased significantly in the past few years, accompanied by a commensurate reduction in average sale price. These phenomena comport with basic economic theory…."

Response: While sales of fresh lemon are unlikely to match the greatly expanded demand for avocado experienced over the past 15 years, lemon imports from Argentina are expected to help meet increased demand during the summer months.

Comment: "Never in our 50 year fresh produce marketing history have we ever witnessed a product marketer willingly give up shelf space. A battle for market share ensues and that battle occurs with price. It takes a minimum of three seasons for an outcome to be identified. Does the Department honestly believe that those engaged in the Mexican or Chilean supply chain are going to acknowledge the onset of Argentine fruit and willingly stipulate: "here comes Argentina I guess we should give up our market share."

Comment: Mexico is the lowest cost supplier to the U.S. market…while U.S. importers have well-established relationships with Chilean importers…. Competitors compete for shelf space, once it has been acquired."

Response: As modeled in the economic analysis, we expect a portion of the fresh lemon imports from Argentina to displace U.S. lemon imports from other countries, such as Mexico and Chile. The extent to which displacement may take place is estimated based on elasticities of excess supply in Argentina and excess demand in the United States.

Comment: "If we allowed Argentina to start to export lemons to the United States, American producers would focus on more expensive fruit that will help them create a higher profit…. [Additionally, as producers drop out after prices bottom] this will again lead to higher prices, but with the important [distinction] that a barrier to trade was lowered."

Response: The economic behavior of firms is based on the profit motive. But the effect of the rule on the price of fresh lemon is not expected to significantly impact U.S. lemon production. It is unlikely that fresh lemon imports from Argentina alone will lead to a decision by U.S. lemon growers to shift production to other fruit.

Comment: When lemon farmers have to deal with ACP control and self-funded research, water and labor shortages, compliance with other regulations, and many additional challenges, a marginal loss of revenue is not trivial and could make the difference between meeting challenges, losing ground, or even going out of business…. As ACP, drought, and other challenges create a "perfect storm" for California citrus, it has never been more important for APHIS to carefully consider the informed scientific concerns that you have heard from the industry experts."

Comment: "The cost of handling pests will also increase driving the cost of lemons higher than they are now."

Comment: "Argentine lemons pose a material risk to all US citrus varieties. USDA's economic analysis wrongly neglects to consider the impact of pest or disease introduction on the citrus industry as a whole."

Comment: "How does a savings of $1.3 million outweigh the potential risks of bringing devastating pests and diseases into our country? For such a small benefit to consumers that will probably not notice the 2 percent price decline, we are potentially devastating a portion of the private sector."

Response: APHIS foresees the prescribed risk management measures providing the appropriate level of phytosanitary protection against the pests of quarantine concern associated with the importation of fresh lemons from Argentina into the continental United States.

Comment: The vast majority of lemon farmers are independently owned and operated, which falls squarely within the definition of "small business concern" for purposes of the Regulatory Flexibility Act. USDA has failed to undertake even a rudimentary analysis of the number of small entities affected by the rule.

Response: We noted in the Initial Regulatory Flexibility Analysis that according to the 2012 Census of Agriculture, there were a total of 3,007 lemon farms in the United States that year. We also noted that some establishments in other industries, such as wholesalers and retailers and businesses engaged in postharvest support, may also be affected by the rule.

Comments filed by the Small Business Administration in response to the Proposed Rule

There were no comments filed by the Small Business Administration in response to the proposed rule.

Potentially Affected Small Entities

The entities potentially affected by the rule will 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 the 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.[22] 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).[23] Establishments classified within NAICS 111320 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.

[22] 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.

[23]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.

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 predominantly small. In 2010, there were 74 packinghouses in California.[24] Approximately 60 percent of these packinghouses market produce through cooperatives such as Sunkist Growers, Inc., the Central California Orange Growers Cooperative, and DNE World Fruit Sales.[25] The remaining packinghouses sell the produce 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

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[24] *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 > Retrieved on: September 9, 2011.

[25] 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.

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, 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. The 2012 Economic Census reported that there were 525 establishments in this industry category. Of this total, 479 operated the entire year and 11 reported revenue of $10 million or more. Given this information, we can infer that the majority of the businesses in this industry category had sales revenue within the $25.5 million threshold and are therefore small by the SBA standard.

Fruit and Vegetable Markets (NAICS 445230) are considered to be small by the SBA standard of annual sales of not more than $7 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.[26]

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

[26] U.S. 2007 Agriculture Census table 37
http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_1_US/

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 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 final rule are discussed in the rule under the heading "Paperwork Reduction Act."

Steps taken by APHIS to minimize Significant Economic Impacts on Small Entities

Based on our review of available information, APHIS does not expect the rule to have a significant economic impact on small entities. In the absence of significant economic impacts, we have not identified alternatives that would minimize such impacts.