



## THE ECONOMIC CONTRIBUTION OF AMERICA'S FARMERS AND THE IMPORTANCE OF AGRICULTURAL EXPORTS

America's farmers and ranchers make an important contribution to the U.S. economy by ensuring a safe and reliable food supply, improving energy security and supporting job growth and economic development. Agriculture is particularly important to the economies of small towns and rural areas, where farming supports a number of sectors, from farm machinery manufacturers to food processing companies.

Because of increasing agricultural productivity, access to world markets will be critical to the industry's continued success. Ninety-five percent of the world's potential consumers live outside of the United States, and population growth in the decades ahead will be concentrated in developing countries.<sup>1</sup> As these countries grow and their citizens' incomes rise, their demand for meat, dairy and other agricultural products will increase.<sup>2</sup>

This report discusses the contribution of farmers and ranchers to the U.S. economy. It describes the critical role of agricultural exports and the opportunities and challenges agricultural exporters face. It concludes by outlining several policy recommendations designed to facilitate agricultural export opportunities and amplify the already significant economic impact of America's farmers.

U.S. farmers, ranchers and food producers are well-positioned to capture an increasing share of the growing world market for agricultural products. The United States is the world's leading exporter of agricultural products.<sup>3</sup> At \$141.3 billion, agricultural exports made up 10% of U.S. exports in 2012.<sup>4</sup> Since 1960, the United States has posted a trade surplus in agriculture. Last year, this surplus totaled \$38.5 billion.<sup>5</sup>

Capturing a growing share of the world market for agricultural products will benefit the entire economy. Agricultural exports currently support nearly one million jobs across the country.<sup>6</sup>

Despite recent success, challenges remain for U.S. agriculture, including uncertainty about future farm policy. U.S. agricultural exporters often confront barriers imposed by countries that keep U.S. products from reaching their target markets. Small and beginning farmers, ranchers and processors may face added burdens in navigating the complexities involved in exporting their products. America's deteriorating transportation infrastructure and uncertainty regarding the agricultural workforce because of unsettled immigration policy add to the challenges facing agricultural exporters. Addressing these challenges will benefit U.S. agriculture and the economy overall.

### The Economic Impact of U.S. Agriculture

The United States has a robust farm economy. Last year, total farm cash receipts exceeded \$390 billion, including \$219.6 billion in cash receipts for crops and \$171.7 billion in cash receipts for livestock and related products.<sup>7</sup> Some products such as wheat, coarse grains, cotton and soybeans are sold in bulk either in the United States or abroad, while most others undergo various levels of processing. Wheat flour, soybean oil, meats, cereals and dairy products are examples of products that receive additional processing prior to their final sale.

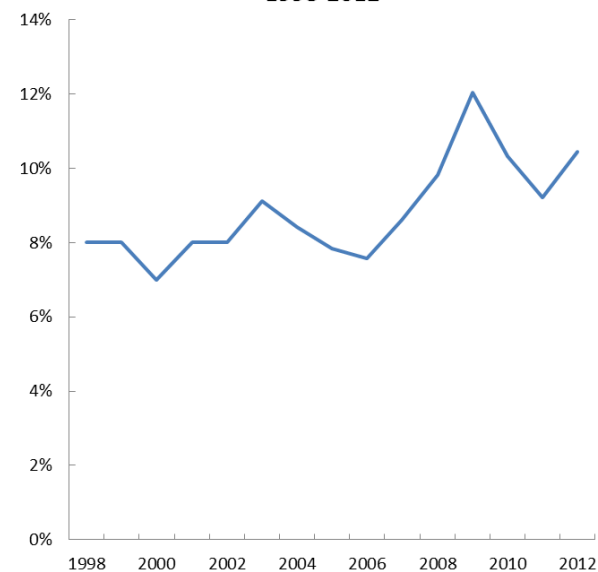
After accounting for production expenses, net farm income totaled \$112.8 billion in 2012, about 125% higher than a decade prior.<sup>8</sup>

A successful agricultural sector supports economic growth overall. By producing a wide variety of foods inexpensively, including fruits, vegetables, grains, meat and dairy products, America's farmers and ranchers ensure a safe and reliable domestic food supply. This sector also improves U.S. energy security and reduces dependence on foreign oil through the production of biofuels and the development of other alternative sources of energy. These new sources of energy can help reduce costs for businesses and consumers. For example, some studies have found that an increased supply of biofuels reduces gas prices, especially as biofuel production technology improves.<sup>9</sup>

A healthy farm economy is especially important to small towns and rural areas.<sup>10</sup> Farmers and ranchers invest in their operations, supporting jobs in farm machinery manufacturing and other industries, and they purchase goods and services from local businesses. High levels of farm production, in turn, improve the prospects for downstream businesses such as food processing companies and biofuel refineries. Businesses up and down the agricultural product supply chain have benefited in recent years as a result of the strong agricultural economy.<sup>11</sup> An increase in sales of organic, specialty and bio-based products, as well as a recent expansion of agritourism, has contributed to this success.<sup>12</sup>

**The role of exports:** Exporting is particularly important for agriculture, since growth in demand for agricultural products in the coming decades is expected to come largely from developing countries. U.S. agriculture has been successful in exporting its products, even as other industries have struggled recently in the global market. While agriculture comprised less than 5% of gross domestic product (GDP) over the 2007 to 2011 period, agricultural products as a share of total exports hovered around 10%.<sup>13</sup> (**Figure 1**)

**Figure 1. Agricultural Products as a Share of Total Exports 1998-2012**



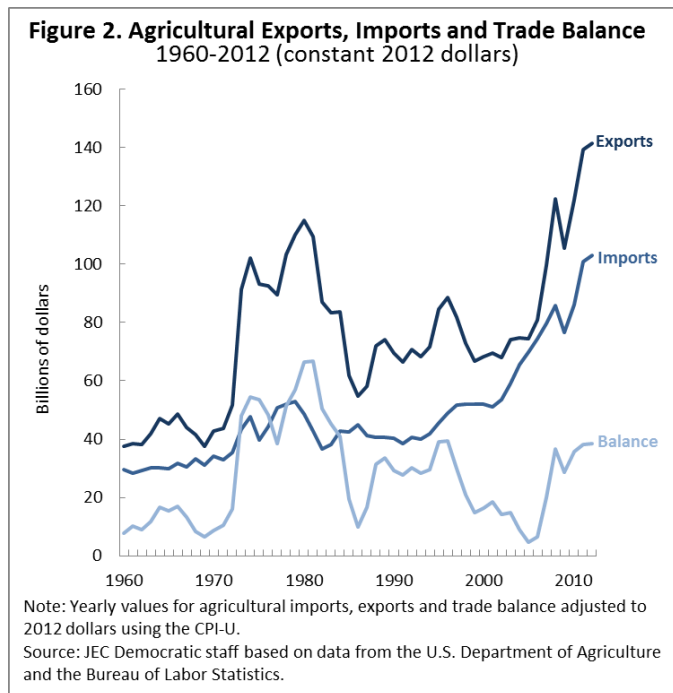
Source: JEC Democratic staff based on data from the U.S. Department of Agriculture.

According to a U.S. Department of Agriculture (USDA) model, each \$1 billion of agricultural exports supported 6,800 American jobs in 2011.<sup>14</sup> These jobs include positions on farms, in the food processing industry, in the trade and transportation sector and in other supporting industries.<sup>15</sup> In general, high-value (processed) exports supported more jobs and economic activity per dollar of exports than bulk exports of raw products.<sup>16</sup> Assuming the number of jobs supported by each \$1 billion of agricultural exports stayed within a range of the values estimated for 2010 and 2011, U.S. agricultural exports supported nearly one million jobs in 2012.<sup>17</sup>

### Recent Trends in Agricultural Exports

In 2012, U.S. agricultural exports—including both bulk and high-value products—totaled \$141.3 billion, the highest level on record.<sup>18</sup> This represented a modest 1.5% increase in the real value of agricultural exports over 2011 but a more significant increase when compared with total agricultural exports in prior years. As **Figure 2** shows, the real value of U.S. agricultural exports has increased substantially over the past decade, due largely to rising demand for food and other agricultural products in developing countries,

especially China.<sup>19</sup> The continued post-recession gains in the value of agricultural exports can also be attributed to currently high farm commodity prices and heightened demand for biofuels.<sup>20</sup>



**Export products:** Since 1990, high-value agricultural exports (which include consumer-ready products and processed goods used as inputs by other industries) have made up the largest share of agricultural exports.<sup>21</sup> Last year, high-value exports accounted for about \$89 billion of agricultural exports (63%), while bulk products accounted for about \$52 billion (37%) of exports.<sup>22</sup>

Grains and feeds accounted for nearly one-quarter of agricultural exports in 2012, representing \$32 billion in export sales, while soybean exports totaled approximately \$25 billion and made up 17.5% of export sales. Red meats accounted for nearly 10% of agricultural exports, as did animal feeds and oil meal, while the following products each made up roughly four to five percent of exports: tree nuts and preparations, fruits, cotton and lint, vegetables, poultry, sugar and tropical products and dairy products.<sup>23</sup>

**Table 1** provides additional detail on agricultural exports by product. Last year corn exports amounted

to just under 30% of grain and feed exports overall and wheat exports were slightly over 25% of these exports.<sup>24</sup> Grain and feed exports overall were down sharply in 2012, a result of last summer's drought, but they are expected to rebound in future years.<sup>25</sup> The United States remains by far the world's largest corn exporter, a position it continued to hold in 2012 despite the dip in corn production.<sup>26</sup>

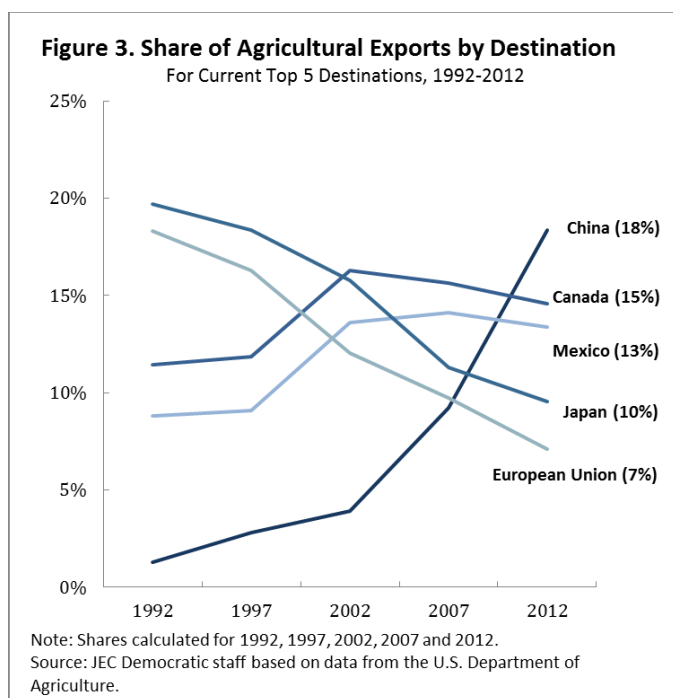
While grain and feed exports declined last year, soybean exports soared, increasing by over 35%. Global demand for soybeans, as well as soybean oil and soybean meal, is expected to continue to grow substantially in the coming years.<sup>27</sup> Several other categories of products posted gains of at least 50% over the 2009 to 2012 period: dairy products, hides and skins, cotton and lint, tree nuts and preparations, sugar and tropical products and red meats.<sup>28</sup>

There has been a dramatic increase in the share of meat products exported over the past several decades. In 1990, the shares of beef, poultry and pork production (by weight) that were exported were 4.4%, 5.2% and 1.6%, respectively; however, by 2012, these shares had increased to 9.4%, 18.9% and 23.1%.<sup>29</sup>

**Export markets:** There have been significant changes over the past two decades in the top markets for U.S. agricultural exports. (**Figure 3**) Twenty years ago, just one percent of U.S. agricultural export sales came from China, and this share had only increased to four percent by 2002.<sup>30</sup> By 2012, China was the top destination for U.S. agricultural exports, purchasing over \$25 billion in products and accounting for over 18% of sales.<sup>31</sup> This dramatic increase can be attributed to population and income growth in China, and to its accession to the World Trade Organization (WTO) in 2001.<sup>32</sup>

Rounding out the top five export destinations in 2012 were Canada, Mexico, Japan and the European Union. Japan, the top destination for U.S. agricultural exports as recently as 2001, has seen its share drop from about 20% in 1992 to under 10% last year. Canada was the leading U.S. agricultural

export destination for much of the first decade of the 21st century before being surpassed by China.



**Exports across the states:** The value of exports varies significantly across the states. (Table 2) In 2011, the most recent year for which state-by-state agricultural export data are available, California led the way with nearly \$18 billion in exports, followed by Iowa, Illinois, Texas, Nebraska and Minnesota. The states with the lowest values in 2011 were Alaska, Rhode Island and New Hampshire.

Nationally, agricultural exports increased by 14.2% from 2010 to 2011, and all fifty states posted gains. Wyoming, Montana, Idaho and Oregon increased their exports by the greatest amount on a percentage basis from 2010 to 2011, with all of these states increasing exports by over 30%. Among the six largest agricultural exporting states, Nebraska exports increased by the most in percentage terms (21.7%). Over the decade from 2001 to 2011, Wisconsin, Iowa and Minnesota saw the greatest percentage gains.

## Challenges to Further Increasing Agricultural Exports and Possible Solutions

Growth in overseas demand will open up new opportunities, and U.S. exporters have the potential to capture a significant share of the expanding market.

However, challenges remain that could keep the United States from taking advantage of these growth opportunities. These challenges include uncertainty about long-term farm policy, trade barriers imposed by foreign countries, issues facing small and beginning farmers, ranchers and processors, the deterioration of U.S. transportation infrastructure and uncertainty in the agricultural workforce resulting from an unsettled immigration policy.

There are a number of actions Congress can take to facilitate export opportunities for America's farmers, ranchers and agricultural producers. Options include:

- Enacting a long-term farm bill to provide certainty for U.S. agriculture;
- Pushing for provisions that reduce barriers to agricultural exports;
- Promoting export opportunities for small and beginning farmers, ranchers and processors;
- Investing in transportation infrastructure; and
- Enacting comprehensive immigration reform to bring stability to the agricultural workforce.

### Enacting a long-term farm bill to provide certainty for U.S. agriculture.

Congress typically reauthorizes agricultural export initiatives and other USDA programs through five-year farm bills. The most recent full reauthorization of these programs occurred in 2008, and the fiscal cliff legislation passed at the beginning of this year extended most of these programs through September 2013 (though this extension did not fund a number of programs that had budgetary baselines that expired on or before September 30<sup>th</sup> of last year, including some programs that help beginning farmers and aid producers in recovering from disasters). Congress has yet to pass a new five-year

farm bill to provide certainty to agricultural exporters who use programs that facilitate export opportunities, including market development programs, credit guarantee programs and direct export subsidies. The USDA's Market Access Program and Foreign Market Development Program are particularly beneficial to exporters.

In June, the Senate passed its version of the farm bill (S. 954), and, in July, the House of Representatives passed its version (H.R. 2642), though H.R. 2642 excluded the nutrition portion that is traditionally included as part of the farm bill. Both bills would reauthorize valuable export assistance programs, as well as create a new Under Secretary of Agriculture responsible for export issues. Quickly reconciling the two bills and enacting a long-term farm bill would provide certainty to agricultural exporters. The final legislation should include both farm and nutrition programs.

#### Pushing for provisions that reduce barriers to agricultural exports.

Agricultural exporters often encounter trade barriers. Despite some progress, average agricultural tariffs remain substantially higher than those imposed on other products.<sup>33</sup> Moreover, unpredictable and unscientific applications of sanitary and phytosanitary (SPS) measures can create a significant burden for exporters, in particular for producers and processors of meat products.<sup>34</sup> The perishable nature of food products means that any delays in adjudicating claims could damage or destroy the products.<sup>35</sup>

Pushing for lower average tariffs on agricultural products, as well as terms that ensure that SPS measures are not used inappropriately to keep U.S. goods out of overseas markets, would help exporters. The President's Export Council included this issue among its ten recommendations to the President in March, calling for the creation of a rapid response mechanism to adjudicate SPS-related claims. Furthermore, funding for the Technical Assistance for Specialty Crops program, which assists specialty crop producers facing SPS-related export challenges, and the Animal and Plant Health Inspection Service, which works with both domestic exporters and foreign governments to work through

SPS issues, would facilitate exports.

#### Promoting export opportunities for small and beginning farmers, ranchers and processors.

Overseas markets offer tremendous growth opportunities for small and beginning farmers, ranchers and agricultural processors. These individuals and businesses face particular challenges in exporting their products. They may not be able to finance losses of a shipment at the border if a country imposes trade barriers, and they are more likely to lack the resources to identify and address such barriers.<sup>36</sup> In addition, small farmers and food producers face many of the same challenges that small businesses in other industries face in exporting. For example, compared with larger businesses, they may have limited knowledge of foreign markets or technical expertise regarding export procedures.

The Export Promotion Act, enacted in 2010 as part of the Small Business Jobs Act, connects small businesses with export promotion and outreach resources through the Department of Commerce to help them expand into new markets. This law also expands the outreach program through the Department's Rural Export Initiative to ensure that small businesses located in rural areas know about available export-promotion services. Improving export opportunities for small farmers and agricultural producers could contribute to increasing exports overall.

#### Investing in transportation infrastructure.

America's deteriorating transportation infrastructure may inhibit agricultural export growth.<sup>37</sup> The agricultural sector relies on various forms of transportation infrastructure to move products from farms and factories to consumers at home and abroad, including roads, rails and ports. Inland transportation infrastructure is particularly important for agricultural exporters. However, infrastructure surveys show that the United States is falling behind in investing in and maintaining its transportation infrastructure compared to global competitors.<sup>38</sup> In the past year, inadequate investment in harbor maintenance and other water infrastructure negatively affected exporters who rely on the Mississippi River and the Great Lakes to transport

their products.<sup>39</sup> According to the American Society of Civil Engineers, the United States needs to spend \$3.6 trillion to bring its infrastructure “into good repair” by 2020.<sup>40</sup>

Passing a long-term surface transportation reauthorization bill, improving water infrastructure and dedicating resources to maintaining existing infrastructure would improve U.S. export capability. Establishing a national infrastructure bank and authorizing the issuance of bonds to fund projects are examples of potential public-private partnerships that could strengthen U.S. infrastructure. Investing in new infrastructure and maintenance in rural areas, as well as taking steps to crack down on “captive shipping” in the railroad industry (which drives up prices for businesses), are steps that could improve inland transportation infrastructure.

Enacting comprehensive immigration reform to bring stability to the agricultural workforce.

Uncertainty regarding the agricultural workforce stemming from an unsettled immigration policy adds to challenges facing agricultural exporters. Foreign-born workers are critical to U.S. agriculture, making up 72% of the workforce.<sup>41</sup> Seasonal and temporary workers are especially vital.<sup>42</sup> Many of the positions these immigrants and temporary residents fill would not otherwise be filled by native-born workers.<sup>43</sup>

The Senate-passed comprehensive immigration reform bill (S. 744) would establish a new agricultural worker visa program to help ensure that the agricultural industry has the workers it needs to harvest crops, raise livestock and produce products for export. The legislation also creates a pathway to citizenship for the roughly 11 million undocumented immigrants currently in the country, many of whom work in agriculture. This legislation would benefit the agricultural sector and the economy overall.

## Conclusion

The agricultural sector makes an important contribution to the U.S. economy, from promoting food and energy security to supporting jobs in communities across the country. Exports are critical to the success of U.S. agriculture, and population and income growth in developing countries ensures that this will continue to be the case in the decades to come. U.S. agricultural exporters are well-positioned to capture a significant share of the growing world market for agricultural products, but some challenges remain. Taking actions to facilitate exports would help to strengthen the agricultural sector and promote overall economic growth.

<b>Commodity</b>	<b>2012 value (billions)</b>	<b>Share of 2012 exports</b>	<b>Percentage change from 2011</b>	<b>Percentage change from 2009</b>
<b>Live animals</b>	\$1.1	0.8%	12.9%	42.0%
<b>Red meats &amp; products</b>	\$12.4	8.8%	0.5%	50.0%
<b>Poultry meats &amp; products</b>	\$6.1	4.3%	9.3%	23.1%
<b>Dairy products</b>	\$5.2	3.7%	4.8%	111.1%
<b>Hides &amp; skins</b>	\$2.8	2.0%	2.2%	77.2%
<b>Grains and feeds</b>	\$32.0	22.6%	-19.1%	18.1%
<b>Wheat</b>	\$8.2	5.8%	-28.4%	41.7%
<b>Rice</b>	\$2.1	1.5%	-3.5%	-10.8%
<b>Corn</b>	\$9.3	6.6%	-33.2%	-0.4%
<b>Other grain products</b>	\$4.7	3.3%	7.3%	18.3%
<b>Animal feeds &amp; oil meal</b>	\$12.1	8.6%	21.4%	37.9%
<b>Soybeans</b>	\$24.7	17.5%	37.8%	40.6%
<b>Other oilseeds</b>	\$1.3	0.9%	7.5%	23.1%
<b>Vegetable oils</b>	\$4.2	2.9%	1.7%	26.0%
<b>Fruits &amp; products</b>	\$6.5	4.6%	5.9%	31.1%
<b>Fruits, fresh</b>	\$4.9	3.5%	7.0%	30.7%
<b>Fruits, prepared or preserved</b>	\$1.6	1.1%	2.6%	32.1%
<b>Fruit juices</b>	\$1.3	0.9%	-4.8%	9.0%
<b>Vegetables &amp; products</b>	\$6.2	4.4%	4.5%	15.9%
<b>Vegetables, fresh</b>	\$2.2	1.5%	-4.8%	5.2%
<b>Vegetables, prepared or preserved</b>	\$4.1	2.9%	10.3%	22.6%
<b>Tree nuts and preparations</b>	\$6.9	4.9%	18.4%	57.8%
<b>Wine</b>	\$1.3	0.9%	1.2%	46.4%
<b>Cotton &amp; linters</b>	\$6.3	4.4%	-27.4%	74.2%
<b>Tobacco, unmanufactured</b>	\$1.1	0.8%	-6.4%	-11.5%
<b>Sugar &amp; tropical products</b>	\$5.3	3.7%	8.0%	51.2%

Note: Yearly values for agricultural exports by product adjusted to 2012 dollars using the CPI-U.  
Source: JEC Democratic staff based on data from the U.S. Department of Agriculture and the Bureau of Labor Statistics.

Table 2. Agricultural Exports by State (in 2011 dollars)					
State	Total exports, 2011 (millions)	Percentage change from 2010	Percentage change from 2001	Top export, 2011	Value of top export, 2011 (millions)
<b>United States Total</b>	\$136,374	14.2%	100.0%	Soybeans	\$17,563
Alabama	\$1,349	24.9%	65.0%	Chicken meat	\$477
Alaska	\$12	2.2%	-52.4%	Vegetables, processed	\$1
Arizona	\$1,692	28.5%	86.7%	Cotton	\$361
Arkansas	\$3,481	9.3%	109.6%	Rice	\$859
California	\$17,844	15.2%	100.4%	Tree nuts	\$4,804
Colorado	\$2,198	28.4%	60.6%	Wheat	\$444
Connecticut	\$258	21.3%	22.7%	Fruits, fresh	\$10
Delaware	\$265	19.1%	41.0%	Chicken meat	\$121
District of Columbia	-	-	-	-	-
Florida	\$3,085	9.7%	42.5%	Fruits, fresh	\$665
Georgia	\$3,195	26.2%	86.7%	Cotton	\$1,250
Hawaii	\$499	11.4%	132.6%	Planting seeds	\$222
Idaho	\$2,170	34.7%	120.2%	Wheat	\$558
Illinois	\$8,238	10.8%	113.6%	Soybeans	\$2,515
Indiana	\$4,655	9.2%	95.0%	Soybeans	\$1,428
Iowa	\$10,577	12.4%	155.7%	Soybeans	\$2,684
Kansas	\$5,265	3.7%	89.9%	Wheat	\$1,474
Kentucky	\$2,434	10.1%	37.7%	Tobacco, unmanufactured	\$354
Louisiana	\$1,574	12.1%	113.9%	Sugar and products	\$304
Maine	\$215	15.3%	38.9%	Vegetables, processed	\$32
Maryland	\$654	19.5%	46.8%	Chicken meat	\$130
Massachusetts	\$226	16.7%	88.8%	Fruits, fresh	\$39
Michigan	\$2,777	17.4%	140.7%	Soybeans	\$478
Minnesota	\$6,738	9.0%	154.4%	Soybeans	\$1,599
Mississippi	\$2,017	20.3%	113.7%	Cotton	\$493
Missouri	\$3,879	7.2%	113.4%	Soybeans	\$1,117
Montana	\$1,632	36.2%	150.5%	Wheat	\$1,044
Nebraska	\$6,930	21.7%	118.6%	Corn	\$1,639
Nevada	\$158	22.2%	41.3%	Beef and veal	\$22
New Hampshire	\$64	10.5%	56.1%	Dairy products	\$7
New Jersey	\$468	7.5%	64.1%	Fruits, fresh	\$55
New Mexico	\$1,028	20.8%	89.0%	Dairy products	\$191
New York	\$1,312	15.4%	115.7%	Dairy products	\$331
North Carolina	\$3,735	12.0%	57.3%	Pork	\$707
North Dakota	\$3,948	5.8%	125.3%	Wheat	\$1,581
Ohio	\$3,734	10.5%	105.8%	Soybeans	\$1,246
Oklahoma	\$1,987	11.9%	74.9%	Wheat	\$418
Oregon	\$1,976	31.2%	48.2%	Wheat	\$355
Pennsylvania	\$1,645	13.7%	86.5%	Dairy products	\$282
Rhode Island	\$24	9.7%	58.4%	Vegetables, processed	\$2
South Carolina	\$959	20.0%	86.2%	Cotton	\$229
South Dakota	\$3,644	20.9%	135.1%	Soybeans	\$826
Tennessee	\$1,627	16.8%	78.6%	Cotton	\$390
Texas	\$7,553	4.8%	85.3%	Cotton	\$2,404
Utah	\$462	24.6%	82.8%	Pork	\$59
Vermont	\$150	20.3%	123.3%	Dairy products	\$66
Virginia	\$1,033	19.8%	41.7%	Chicken meat	\$108
Washington	\$3,307	21.0%	85.3%	Wheat	\$803
West Virginia	\$121	15.6%	49.0%	Chicken meat	\$28
Wisconsin	\$3,176	19.4%	174.6%	Dairy products	\$634
Wyoming	\$404	41.9%	56.7%	Beef and veal	\$74

Note: "-" indicates no value available. Yearly values for agricultural exports by state adjusted to 2011 dollars using the CPI-U.  
Source: JEC Democratic staff based on data from the U.S. Department of Agriculture and the Bureau of Labor Statistics.



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- <sup>5</sup> JEC Democratic staff calculations based on data from the U.S. Department of Agriculture, Economic Research Service, U.S. Agricultural Trade, Calendar Year.
- <sup>6</sup> JEC Democratic staff calculations based on data from the U.S. Department of Agriculture, Economic Research Service, U.S. Agricultural Trade, Calendar Year, and the U.S. Department of Agriculture, Economic Research Service, “Effects of Trade on the U.S. Economy,” 2011 Data Overview, updated June 17, 2013. <http://www.ers.usda.gov/data-products/agricultural-trade-multipliers/effects-of-trade-on-the-us-economy.aspx>. Calculations assume that employment per billion dollars of agricultural exports stayed within a range of values found for 2010 and 2011.
- <sup>7</sup> JEC Democratic staff calculations based on data from the U.S. Department of Agriculture, Economic Research Service, Farm Income and Balance Sheet Indicators, 1929-2013F, expressed in nominal dollars.
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- <sup>12</sup> Ibid.
- <sup>13</sup> JEC Democratic staff calculations based on data from the U.S. Department of Agriculture, Economic Research Service, Value of U.S. Trade--Agricultural and Total--and Trade Balance, Calendar Year. For data on agriculture as a share of gross domestic product, see U.S. Department of Agriculture, Economic Research Service, “FAQs,” data from U.S. Department of Commerce, Bureau of Economic Analysis, Gross Domestic Product by Industry Accounts, Value Added by Industry as a Percentage of Gross Domestic Product, November 13, 2012. <http://www.ers.usda.gov/faqs.aspx#UegXrm15Hj4>.
- <sup>14</sup> JEC Democratic staff calculations based on data from the U.S. Department of Agriculture, Economic Research Service, U.S. Agricultural Trade, Calendar Year, and the U.S. Department of Agriculture, Economic Research Service, “Effects of Trade on the U.S. Economy,” 2011 Data Overview, updated June 17, 2013. <http://www.ers.usda.gov/data-products/agricultural-trade-multipliers/effects-of-trade-on-the-us-economy.aspx>.
- <sup>15</sup> Ibid.
- <sup>16</sup> Ibid, and U.S. Department of Agriculture, Economic Research Service, “2011 ERS Trade Multipliers (Open Model),” updated June 17, 2013. <http://www.ers.usda.gov/data-products/agricultural-trade-multipliers.aspx#UegYXm15Hj4>.

<sup>17</sup> JEC Democratic staff calculations based on data from the U.S. Department of Agriculture, Economic Research Service, U.S. Agricultural Trade, Calendar Year, and the U.S. Department of Agriculture, Economic Research Service, "Effects of Trade on the U.S. Economy," 2011 Data Overview, updated June 17, 2013. <http://www.ers.usda.gov/data-products/agricultural-trade-multipliers/effects-of-trade-on-the-us-economy.aspx>. Calculations assume that employment per billion dollars of agricultural exports stayed within a range of values found for 2010 and 2011.

<sup>18</sup> JEC Democratic staff calculations based on data from the U.S. Department of Agriculture, Economic Research Service, U.S. Agricultural Trade, Calendar Year.

<sup>19</sup> JEC Democratic staff calculations based on data from the U.S. Department of Agriculture, Economic Research Service, U.S. Agricultural Trade, Calendar Year, and the U.S. Department of Labor, Bureau of Labor Statistics, Consumer Price Index. Yearly values for agricultural imports, exports and trade balance debt adjusted to 2012 dollars using the CPI-U; Appreciation of foreign currencies relative to the dollar has also contributed to the rise in exports. For a discussion of growth in developing countries, as well as the value of the agricultural trade-weighted dollar, see U.S. Department of Agriculture, Office of the Chief Economist, *USDA Agricultural Projections to 2022*, Long-term Projections Report OCE-2013-1, February 2013. <http://www.ers.usda.gov/media/1013562/oce131.pdf>.

<sup>20</sup> Henderson, Jason, Brent Gloy and Michael Boehlje, "Agriculture's Boom-Bust Cycles: Is This Time Different?" Federal Reserve Bank of Kansas City, *Economic Review*, Fourth Quarter 2011. <http://www.kansascityfed.org/publicat/econrev/pdf/11q4HendersonGloyBoehlje.pdf>.

<sup>21</sup> JEC Democratic staff calculations based on data from the U.S. Department of Agriculture, Economic Research Service, Calendar Year Bulk and High-Value Agricultural Product Exports, and Congressional Research Service, *U.S. Agricultural Trade: Trends, Composition, Direction, and Policy*, May 21, 2012. <http://www.crs.gov/pdfloader/98-253>.

<sup>22</sup> JEC Democratic staff calculations based on data from the U.S. Department of Agriculture, Economic Research Service, Calendar Year Bulk and High-Value Agricultural Product Exports.

<sup>23</sup> JEC Democratic staff calculations based on data from the U.S. Department of Agriculture, Economic Research Service, U.S. Agricultural Exports, year-to-date and current months (includes totals for 2009-2012).

<sup>24</sup> Ibid.

<sup>25</sup> U.S. Department of Agriculture, Office of the Chief Economist, *USDA Agricultural Projections to 2022*, Long-term Projections Report OCE-2013-1, February 2013. <http://www.ers.usda.gov/media/1013562/oce131.pdf>. For a discussion of the impact of last year's drought on corn exports, see U.S. Department of Labor, Bureau of Labor Statistics, "Impact of the Drought on Corn Exports: Paying the Price," *Beyond the Numbers*, Volume 1, Number 17, November 2012. <http://www.bls.gov/opub/btn/volume-1/pdf/impact-of-the-drought-on-corn-exports-paying-the-price.pdf>.

<sup>26</sup> U.S. Department of Agriculture, Office of the Chief Economist, *USDA Agricultural Projections to 2022*, Long-term Projections Report OCE-2013-1, February 2013. <http://www.ers.usda.gov/media/1013562/oce131.pdf>.

<sup>27</sup> JEC Democratic staff calculations based on data from the U.S. Department of Agriculture, Economic Research Service, U.S. Agricultural Exports, year-to-date and current months (includes totals for 2009-2012), and the U.S. Department of Labor, Bureau of Labor Statistics, Consumer Price Index. Yearly values for agricultural exports adjusted to 2012 dollars using the CPI-U.

<sup>28</sup> Ibid.

<sup>29</sup> JEC Democratic staff calculations based on data from the U.S. Department of Agriculture, Foreign Agricultural Service, Production, Supply and Distribution (PSD) Database.

<sup>30</sup> JEC Democratic staff calculations based on data from the U.S. Department of Agriculture, Economic Research Service, Top 15 U.S. Agricultural Export Destinations, Calendar Year.

<sup>31</sup> Ibid.

<sup>32</sup> Nigh, Veronica, "China's Agricultural Policy and U.S. Access to China's Market," Statement of the American Farm Bureau Foundation, Testimony before the U.S.-China Economic and Security Review Commission, April 25, 2013. [http://www.uscc.gov/sites/default/files/Nigh\\_testimony.pdf](http://www.uscc.gov/sites/default/files/Nigh_testimony.pdf).

<sup>33</sup> JEC Democratic staff calculations based on data from the World Trade Organization, *World Tariff Profiles 2012*. [http://www.wto.org/english/res\\_e/booksp\\_e/tariff\\_profiles12\\_e.pdf](http://www.wto.org/english/res_e/booksp_e/tariff_profiles12_e.pdf); See also Congressional Budget Office, *Policies That Distort World Agricultural Trade: Prevalence and Magnitude*, August 2005. <http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/66xx/doc6614/08-22-doha.pdf>.

<sup>34</sup> Office of the United States Trade Representative, *2013 Report on Sanitary and Phytosanitary Measures*, March 2013. <http://www.ustr.gov/sites/default/files/2013%20SPS.pdf>.

<sup>35</sup> Food and Agriculture Task Force of the U.S. Business Coalition for the Trans-Pacific Partnership, Letter to the President's Export Council, March 8, 2013. [http://www.ita.doc.gov/pec/docs/Food\\_and\\_Agriculture\\_Task\\_Force\\_03082013.pdf](http://www.ita.doc.gov/pec/docs/Food_and_Agriculture_Task_Force_03082013.pdf); See also National Grain and Feed Association & North American Export Grain Association, Letter to the President's Export Council, March 8, 2013. [http://www.ita.doc.gov/pec/docs/National\\_Grain\\_and\\_Feed\\_Association\\_03082013.pdf](http://www.ita.doc.gov/pec/docs/National_Grain_and_Feed_Association_03082013.pdf); See also American Farm Bureau, "U.S. Agricultural Trade Update," January 2013. <http://www.fb.org/assets/files/economicanalysis/TradeUpdate-January2013.pdf>.

<sup>36</sup> Office of the United States Trade Representative, *2013 Report on Sanitary and Phytosanitary Measures*, March 2013. <http://www.ustr.gov/sites/default/files/2013%20SPS.pdf>.

<sup>37</sup> American Farm Bureau Foundation, "Infrastructure White Paper," April 2013. <http://www.fbactinsider.org/wp-content/uploads/2013/04/waterways-infrastructure-white-paper.pdf>; See also Pennsylvania Farm Bureau, "Trade Barriers for Agricultural Exports," Testimony before the Committee on Small Business, Subcommittee on Agriculture, Energy and Trade, U.S. House of Representatives, July 26, 2012. [http://smallbusiness.house.gov/uploadedfiles/7-26\\_shaffer\\_testimony.pdf](http://smallbusiness.house.gov/uploadedfiles/7-26_shaffer_testimony.pdf).

<sup>38</sup> World Economic Forum, *Global Competitiveness Report 2012-2013*, September 2012. [http://www3.weforum.org/docs/WEF\\_GlobalCompetitivenessReport\\_2012-13.pdf](http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2012-13.pdf)

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<sup>40</sup> American Society of Civil Engineers, 2013 American Infrastructure Report Card. <http://www.infrastructurereportcard.org/a/#p/home>.

<sup>41</sup> Kugler, Adriana, "Immigration and Its Contribution to Our Economic Strength," Testimony before the U.S. Congress Joint Economic Committee, May 7, 2013. [http://www.jec.senate.gov/public//index.cfm?a=Files.Serve&File\\_id=78204a8f-ca20-4e2d-8411-49ef4a044425](http://www.jec.senate.gov/public//index.cfm?a=Files.Serve&File_id=78204a8f-ca20-4e2d-8411-49ef4a044425).

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<sup>43</sup> *Ibid.* For further discussion of the complementary nature of immigrants and native-born workers, see Peri, Giovanni, "The Effect of Immigration on Productivity," *Review of Economics and Statistics* 94, no. 1, 2012; See also Peri, Giovanni and Chad Sparber, "Task Specialization, Immigration and Wages," *American Economic Journal: Applied Economics* 1, no. 3, 2009; See also Ottaviano, Gianmarco and Giovanni Peri, "Rethinking the Effect of Immigration on Wages," *Journal of the European Economic Association* 10, no. 1, 2012; See also Shierholz, Heidi, "Immigration and Wages; Methodological Advancements Confirm Modest Gains for Native Workers," Economic Policy Institute, February 4, 2010. <http://www.epi.org/publication/bp255/>.