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# 2015 Top Markets Report **Agricultural Equipment**

A Market Assessment Tool for U.S. Exporters

July 2015



Industry & Analysis' (I&A) staff of industry, trade and economic analysts devise and implement international trade, investment, and export promotion strategies that strengthen the global competitiveness of U.S. industries. These initiatives unlock export, and investment opportunities for U.S. businesses by combining in-depth quantitative and qualitative analysis with ITA's industry relationships.

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## Executive Summary and Findings

**Agricultural Equipment is produced in the United States by a robust and highly successful manufacturing industry, with total domestic and foreign sales of \$38.9 billion in 2013. U.S. exports were worth \$11.1 billion in 2014. More than 1,000 U.S. manufacturers provide commercial producers of food, fiber, fuel crops, and livestock around the world with a wide range of high-technology agricultural equipment. Despite intense global competition and globally weak prices for commodities produced by many U.S. exporters' customers, the United States enjoys a strong trade surplus in agricultural equipment. Export growth is driven by a global population that is expected to reach 9 billion by 2050, as well as expanding middle class populations in many emerging economies. Technologies to produce more food, in greater variety, more efficiently, while conserving scarce water and other resources will be in demand for the foreseeable future.**

ITA expects U.S. agricultural equipment exports to decline in 2015, although not as steeply as in 2014. Exports of machinery and equipment for raising grain, oilseeds, and other commodity crops will fall more sharply than agricultural equipment overall, based mostly on weak international commodity prices. Parts and components, especially for overseas manufacturing, will also decline. Exports of equipment for the livestock and produce sectors, conversely, will grow modestly. ITA anticipates that exports will flatten out in 2016, as international grain prices stabilize.

Growth prospects for U.S. agricultural equipment exports remain strong over the medium- to long-term, however, as the industry's fundamentals should continue to underpin U.S. competitiveness for the foreseeable future. The world's population is expected to exceed 9 billion by 2050,<sup>1</sup> but land and water available for agriculture is becoming scarcer by the day. Demand for innovative products that improve yields

and lower costs are thus at a premium, positioning U.S. suppliers as providers-of-choice for many commercial farmers around the world. Today, U.S. manufacturers provide essential technology for raising hundreds of different food and fiber crops and livestock.

Nevertheless, U.S. exporters remain vulnerable to fluctuating prices for the agricultural commodities that their customers grow and sell, as well as to other economic variables, including the cost of fuel and other inputs, exchange rates, the availability of credit, etc. As prices for commodities increase, so do the profit margins of the agricultural producers, creating more purchasing power and higher demand for U.S. products. When prices decline, farmers must cut costs, often choosing to retain existing equipment or upgrade using cheaper technology procured from lower-cost providers outside the United States.

**Figure 1: Projected Top Markets for Agricultural Equipment Exports (2015-2016)**

<u>Market</u>	<u>Volume/ Growth Rankings</u>	<u>Affiliations</u>	<u>Market</u>	<u>Volume/ Growth Rankings</u>	<u>Affiliations</u>
Canada	1/8	NAFTA, OECD	Chile	11/9	FTA, OECD
Australia	2/18	AUSFTA, OECD	Japan	12/13	OECD
Mexico	3/7	NAFTA, OECD	Sweden	13/19	EU, OECD
Germany	4/11	EU, OECD	Spain	14/16	EU, OECD
France	5/10	EU, OECD	Italy	15/17	EU, OECD
Netherlands	6/3	EU, OECD	Turkey	16/4	OECD
Belgium	7/12	EU, OECD	Poland	17/2	EU, OECD
United Kingdom	8/15	EU, OECD	Denmark	18/6	EU, OECD
Korea	9/12	KORUS, OECD	Lithuania	19/1	EU
New Zealand	10/2	OECD	Czech Republic	20/5	EU, OECD

NOTE: Markets listed in order of U.S. 2013 agricultural equipment export volume. Growth ranking is based on the average of the 2004-2013 and 2011-14 combined annual growth rates (CAGR). Affiliations are relationships that indicate a high degree of market access for U.S. exports: North American Free Trade Agreement (NAFTA), U.S.-Australia FTA (AUSFTA), U.S. Korea FTA (KORUS), membership in the European Union (EU) or the Organization for Economic Cooperation and Development (OECD).

As a result, U.S. agricultural equipment exporters do business in a highly dynamic global agricultural setting. Currently, although prices for most major commodities are relatively high, grain and oilseed prices are well off the peaks reached between 2007 and 2012. Productivity growth is slowing for many crops, while strong demand and limited global stocks of key commodities will likely keep prices from falling much farther. Growing urban, middle-class populations are transforming their diets with a much greater preference—backed up with purchasing power—for higher-value food products, especially animal protein.<sup>2</sup> Increasing water scarcity, limited agricultural land, and the growing impact of climate change on agriculture all challenge equipment manufacturers to constantly adapt and develop new technologies and products to remain competitive.

In the near term, ITA expects U.S. exporters will see the best growth prospects in markets where the agricultural economy includes robust livestock and/or fresh produce sectors. A growing middle-class that wants and can afford high-value protein, dairy, and fruits and vegetables is another strong indicator. Finally, countries in a position to export such products are also likely growth markets for U.S. agricultural equipment exporters for the period 2015-2016.

In 2014, U.S. agricultural equipment exports declined 8.8 percent from the previous year. This decline was due principally to a 16.8 percent fall in exports of equipment for producing grain, oilseeds, and other commodity crops, to \$3.8 billion, and a 12.6 percent decline in exports of parts and components, to \$3.5 billion. Exports grew last year in several smaller sub-sectors, however. Equipment for raising livestock saw foreign sales rise 7.1 percent to \$863.5 million. Equipment for cultivating fresh produce and higher-value crops enjoyed a 3.5 percent increase in exports, to \$860.6 million.

### Agricultural Equipment Export Markets

The most important influence on the sale of agricultural equipment is the price farmers receive for their crops or livestock at the farm gate. Basic commodities trade globally. Their prices are widely reported and sophisticated commercial farmers watch them closely, calibrating their business decisions accordingly. Global commodity prices are also widely available for basic meat and dairy products. Prices for fresh produce and

**Figure 2: Dynamic Growth Markets (Rankings and Affiliations)**

<u>Market</u>	<u>Volume/Growth</u>	<u>Affiliation</u>
Brazil	1/5	Mercosur, WTO
China	2/1	WTO
Russia	3/2	EEC, WTO
South Africa	4/4	SACU, WTO
Ukraine	5/3	EU Assoc., WTO

NOTE: Markets listed in order of U.S. 2013 agricultural equipment export volume. Growth ranking is based on the average of the 2004-2013 and 2011-14 combined annual growth rates (CAGR). Affiliations are relationships with regional customs unions or trading blocs: Mercosur (customs union), the Eurasian Economic Commission (EEC; customs union), Southern African Customs Union (SACU; customs union), World Trade Organization (WTO). In addition, Ukraine has an Association Agreement with the European Union.

other high-value crops are more difficult to track, and are often more localized; as a result, more indirect indicators are often used to anticipate market behavior.

Export performance in the agricultural equipment industry varies widely among several sub-sectors, including equipment for producing:

- **grains** (wheat, rice, corn, others), **oilseeds** (cottonseed, peanut, rapeseed, soybean and sunflower seed), and **other commodity crops** (cotton, sugar beet, potatoes, others);
- **livestock** (beef, pork, poultry, dairy cattle, others); and
- **fresh produce and other high-value crops** (fresh fruits and vegetables, tree-nuts and other orchard crops, coffee, others).

Roughly 50 percent of U.S. agricultural equipment exports can be linked to these sub-sectors. This study will evaluate global markets with these categories in mind.

Parts and components for agricultural equipment are another major element of U.S. trade in agricultural equipment. Specialized engines, engine parts, and parts and components for tractors make up about 18 percent of U.S. exports; total parts exports, less engines, are about 28 percent of the total. Parts exports support both manufacturers' after-sales service operations and the globalized manufacturing operations of the larger U.S. agricultural original equipment manufacturers (OEMs).

### Figure 3: Agricultural Equipment Trade Snapshot

#### Global Trade--2013

\$58 billion\*

#### Annual Growth—2004-13

7.3%\*\*

#### U.S. Market Share—2013

11.9%

NOTE: \*Less tractor parts; \*\*Compound Annual Growth Rate (CAGR)

Source: UN Comtrade Data

Sales of equipment for producing grains, oilseeds and other commodity crops—the largest sub-sector, averaging 36.1 percent annually from 2009 through 2014—are highly dependent on the prices offered on global markets for those commodities.

Global trade in agricultural equipment, including U.S. exports, more than tripled in the 11 years between 2001 and 2012. This growth coincided with a strong run-up in global commodity prices that peaked in 2011-2012. With the turn in grain and oilseed prices that followed, overall U.S. agricultural equipment exports fell nearly 10 percent through 2014. Overseas sales of equipment for grain/oilseed/commodity crop production declined by nearly 25 percent.

Although there are many influences on sales of equipment for raising livestock (7.3 percent of exports), low grain prices tend to expand production of livestock, since feed is less expensive. Sales prospects for produce-related machinery are independent of grain prices. For all high-value products, overall economic growth, consumer preferences, and disposable income are key variables driving prices. Put simply, while the economic forces at work on parts exports are diverse, the overall impact of the global decline in commodity prices has been negative.

#### Caveats

All data and analysis in this study is based on North American Industry Classification System (NAICS) 333111 “Farm Machinery and Equipment Manufacturing” and the 94 ten-digit tariff codes associated with it from the Harmonized Tariff Schedule (HTS) of the United States. A breakout of these products can be found in Appendix 2. While the range of products included under NAICS 333111 is extensive, it omits certain types of equipment that are in widespread use in commercial agriculture.

Missing are grain storage buildings, precision agriculture technology (satellite navigation, wireless internet, information technology and other ITC products for maximizing the productivity of agricultural inputs) not included as original equipment in many types of farm machinery; and pumps, filters, and other systems that support the use of irrigation equipment. Data for these products cannot be broken out from U.S. or international trade data for specific agricultural end-uses. Also missing are more general purpose products such as light construction machinery, transportation equipment, etc.

For most of the last decade, Russia and Ukraine have been leading “dynamic growth” markets as identified in this study. Annual growth for U.S. agricultural equipment exports to both countries was well into double digits from 2004 through 2013: 30.5 percent for Ukraine and 17.0 percent for Russia. As recently as 2012, Ukraine was the United States’ seventh-largest export market, worth \$381.6 million, ahead of ninth-ranked Russia, at \$335.7 million. Since the outbreak of the conflict between the two countries last year, however, U.S. agricultural equipment exports have fallen precipitously—to Ukraine by more than 50 percent; to Russia by almost 25 percent. Given the character of the conflict and the damage it is inflicting on the two countries’ economies, it will be some time before these markets recover their previous vigor.

India is the world’s second-largest agricultural economy and has the world’s second-largest population. Paradoxically, however, the country is a negligible market for U.S. agricultural equipment. U.S. 2014 exports to India were worth \$24 million, two-tenths of one percent of the total. Indian agricultural equipment imports from the rest of the world are also less than one percent of the global total.

The principle reason India is such a small market for imported agricultural equipment is that most Indian farms are very small. As a result, the farmers’ output—and therefore, income—is too small to support investment in imported equipment. Moreover, very few Indian farmers have access to the kind of credit facilities or technical support they would need to make and sustain significant investments in equipment or other technology.

## Challenges Facing Exporters

Most U.S. agricultural equipment exporters are small and medium-sized enterprises (SMEs). In 2012, sixty percent of manufacturing establishments had fewer than 20 employees.<sup>3</sup> As a result, they have limited sales and engineering resources. Trade finance and working capital can also be hard to obtain for small companies with relatively small transactions. They compete, as well, with foreign manufacturers that often enjoy strong support from their own governments, including Germany, China, Italy, Japan, and others.

Paradoxically, many of the most dynamic growth markets—markets that have had strong growth and relatively high sales volumes—also present some of the greatest challenges. Tariff and non-tariff barriers can be onerous, customs administration slow and arbitrary, and protection of intellectual property rights (IPR) weak. Growth markets can also be extremely volatile. For example, as stated above, Russia and Ukraine are rapidly declining as markets as a result of their current political and military conflict.

American manufacturers of agricultural equipment are highly innovative. New technologies and products are being introduced all the time. Consequently, protection of intellectual property rights (IPR), including trade secrets, is a serious concern. This is especially—although not exclusively—true with respect to China.<sup>4</sup>

### *Industrial Policy*

Both China and Brazil pose major challenges for U.S. exporters as a consequence of their aggressive industrial policies. The Chinese Government has identified agricultural equipment and food processing machinery as priority sectors for its Strategic Emerging Industries (SEI) initiative. U.S. agricultural equipment manufacturers are highly vulnerable to having their IP stolen, being out-manuevered in international standards development, and possibly to other elements of Chinese industrial policy. Specific concerns include aggressive subsidies for the purchase of domestically-produced goods, but not for imports; rampant theft of intellectual property; and the use of standards to disadvantage foreign manufacturers, especially in third-country markets.

Brazilian industrial policy also aggressively promotes domestic manufacturing and export competitiveness at the expense of imports. The Plano Brasil Maior (the “Greater Brazil Plan”) provides an array of policies and programs to promote and finance localization of

## Figure 4: Major Trade Events

### *Domestic:*

#### **International Production & Processing Expo**

Atlanta, Georgia

[ippexpo.org](http://ippexpo.org)

#### **World Ag Expo**

Tulare, California

[worldagexpo.com](http://worldagexpo.com)

#### **Farm Progress Show**

Boone, Iowa

[farmprogressshow.com](http://farmprogressshow.com)

#### **Big Iron Farm Show**

Fargo, North Dakota

[bigironfarmshow.com](http://bigironfarmshow.com)

#### **The Irrigation Show & Education Conference**

Long Beach, California (2015)

[www.irrigation.org/IrrigationShow/](http://www.irrigation.org/IrrigationShow/)

### *International:*

#### **Agri-Show**

Ribeirao Preto, Sao Paulo, Brazil

[www.agrishow.com.br/en/](http://www.agrishow.com.br/en/)

#### **Agritechnica**

Hanover, Germany (2015)

[www.agritechnica.com/home-en.html?&L=9](http://www.agritechnica.com/home-en.html?&L=9)

#### **Commonwealth Bank Ag-Quip Field Days**

Gunnedah, New South Wales, Australia

[www.farmonline.com.au/events/agquip](http://www.farmonline.com.au/events/agquip)

#### **EuroTier**

Hanover, Germany (2016)

[www.eurotier.com/home-en.html](http://www.eurotier.com/home-en.html)

#### **Expo Agroalimentaria**

Irapuato, Guanajuato State, Mexico

[www.expoagroto.com](http://www.expoagroto.com)

#### **Nampo Harvest Day**

Bothaville, the Free State, South Africa

[www.grainsa.co.za/pages/nampo/nampo-home](http://www.grainsa.co.za/pages/nampo/nampo-home)

manufacturing in Brazil. Sixty percent local content is generally required for products to receive duty-free treatment within the Mercosur Customs Union (Brazil, Argentina, Paraguay, Uruguay, and Venezuela). The National Bank for Economic and Social Development

(BNDES) is another arm of Brazilian industrial policy, promoting the localization of manufacturing facilities and employment through deeply discounted interest rates.

For more information on these and other concerns, see the “2014 National Trade Estimate Report on Foreign Trade Barriers,” published by the United States Trade Representative, at <https://ustr.gov/sites/default/files/2014%20NTE%20Report%20on%20FTB.pdf>

China, Brazil and other markets prohibit the import of remanufactured goods, which are typically classified as “used.” China also maintains restrictions that prevent remanufacturing inputs (“cores”) from being imported, except for special economic zones. Brazil restricts the entry of certain types of remanufactured goods, including agricultural equipment and parts. In general, Brazil only allows the importation of such goods if an importer can provide evidence that the goods are not or cannot be produced domestically. In these and other markets, such bans have a negative impact not only on U.S. exporters, but also on local agricultural producers by denying them access to low-cost, high-quality remanufactured parts and components for U.S. agricultural equipment.<sup>5</sup>

#### U.S. Food Safety Modernization Act

The U.S. Food Safety Modernization Act (FSMA) is likely to influence investment in agricultural equipment, food processing and packaging machinery, and related goods and services in a number of countries. FSMA will require importers of foreign produce, seafood, spices, ingredients, and other food products regulated by the U.S. Food and Drug Administration (FDA) to meet—and document that they meet—the same requirements as U.S. domestic producers.<sup>6</sup>

Importers that fail to meet FSMA requirements will find their products excluded from the U.S. market. To retain access to the U.S. market, growers and processors in many countries will have to invest in improved water management for agriculture and food processing, irrigation and packing-house equipment, specialized information technology, and more. U.S. manufacturers and exporters are especially well positioned to offer foreign buyers the equipment and systems that will enable them to comply with this new law. On-going outreach and collaboration with foreign governments by the FDA is critical to the success of FSMA.<sup>7</sup>

### The Food Safety Modernization Act

Signed into law on January 4, 2011, the objective of the Food Safety Modernization Act (FSMA) is to ensure the safety of the U.S. food supply by shifting the regulatory focus from responding to food contamination to preventing it. Among its major provisions, FSMA gives the U.S. Food and Drug Administration (FDA) much greater authority to ensure that imported products meet U.S. standards and are safe for U.S. consumers. New authorities include:

**Importer accountability:** Importers will have an explicit responsibility to verify that their foreign suppliers have adequate preventive controls in place to ensure that the food they produce is safe.

**Third Party Certification:** FSMA will permit qualified third parties to certify that foreign food facilities comply with U.S. food safety standards. This certification may be used to facilitate the entry of imports.

**Certification for high risk foods:** FDA can require that high-risk imported foods be accompanied by a credible third-party certification or other assurance of compliance as a condition of entry into the United States.

**Voluntary qualified importer program:** FDA will establish a voluntary program for importers that provides for expedited review and entry of foods from participating importers. Eligibility will be limited to, among other things, importers offering food from certified facilities.

**Authority to deny entry:** FDA can refuse entry into the U.S. of food from a foreign facility if FDA is denied access by the facility or the country where the facility is located.

**Enhanced Partnerships:** The law directs FDA to develop a comprehensive plan to expand the capacity of foreign governments and their industries. One component of the plan is to address training of foreign governments and food producers on U.S. food safety requirements.

Source: **U.S. Food and Drug Administration**, *Background on the FDA Food Safety Modernization Act (FSMA)*; August 5, 2014; <http://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm239907.htm>

There is widespread private-sector concern that it soon will become difficult to export used agricultural and other off-road machinery equipped with diesel engines that meet the latest EPA-mandated emissions standards. The final “Tier IV” standards for new off-road diesel engines now require that engines sold for use in the United States emit only extremely low amounts of certain pollutants. To accomplish this, Tier IV engines can use only diesel fuel with very low sulfur

content. Low-sulfur fuel is generally not available in markets that take large quantities of used equipment.

### Trade Events

Trade exhibitions are a widely used and highly cost-effective venue for agricultural equipment manufacturers to market their products to dealers, importers, and end-users. There are numerous, well-established domestic and international trade exhibitions serving different sub-sectors, regions, and countries. In North America, such events are generally known as “farm shows;” elsewhere in the English-speaking world they may be referred to as “field days.” More conventional industrial trade shows also serve certain markets and segments of this industry. A representative list of events can be found in the box (“Major Trade Events”) on page 6.

### Trade Finance

Securing export financing is a constant challenge for most U.S. agricultural equipment manufacturers. For many, the Export-Import Bank of the United States is a key resource that supplements private-sector financial services. In addition to ExIm, the U.S. Agency for International Development (USAID) also provides financial services or funding for U.S. agricultural equipment exporters to certain markets.

## **Methodology**

### Types of Markets

This study groups export markets for U.S. agricultural equipment into three categories: *Strategic*, *Dynamic Growth*, and *Long-Term Opportunity*. Strategic markets are stable, relatively mature markets in advanced economies that offer a high level of market access. Dynamic Growth markets are more volatile, but have demonstrated high rates of growth, relatively high overall volumes of U.S. exports, and offer significant opportunities for further growth. Long-Term opportunity markets are very small economies that are growing rapidly and offer significant long-term possibilities for growth along with a high degree of volatility.

Strategic markets—because they are politically and economically stable, afford a high degree of market access, and pose relatively low risk—have much to offer any U.S. agricultural equipment manufacturer. Dynamic Growth markets offer—potentially—greater rewards, but also significantly greater risk. U.S. manufacturers should consider carefully the pros and cons for their company of doing business in these markets. Long-term Opportunity markets offer high levels of risk, but also—

potentially—significant scope for growth in the future; experienced exporters may find these markets attractive.

### Rankings

This *Top Markets Report* ranks export markets based on the criteria and data described below. The same methodology is applied to ranking both groups.

- Volume – The volume ranking is the nominal U.S. dollar value of 2013 U.S. agricultural equipment exports derived from data classified according to the U.S. Harmonized Tariff Schedule (HTS) ten-digit codes for these products. This group of codes, in turn, corresponds to NAICS 333111 Farm Machinery and Equipment. Markets are ranked by dollar value, highest to lowest.
- Growth – The growth ranking is derived by averaging the Compound Annual Growth Rate (CAGR) for the periods 2004-13 and 2011-14. The average includes the 2004-13 CAGR to capture long-term growth trends. The 2011-2014 CAGR is included to capture more recent developments. The data for 2014 was the ITA (OTM/Machinery Team) estimate for the year, based on nine-month U.S. export data—all that was available at the time the rankings were done.
- Performance – Globally and for each country case study, analyses of past and estimated future export performance are based on a comparison of U.S. agricultural equipment exports for use in specific sub-categories—grains and oilseeds, livestock, produce—with global commodity prices (where available) and other factors influencing the corresponding end-use categories. See Section V of this study, “Sub-Sectors,” for more detail.

U.S. export data is derived from 2014 U.S. exports, HTS 10-digit data for agricultural equipment. The U.S. share of individual countries import markets and the U.S. share of global trade are based on UN CompTrade data for 2013. Data on individual country agricultural production, for the year 2012, are derived from the United Nations Food and Agricultural Organization (UN FAO) “FAOStat.” Information on global agricultural commodity prices is derived from the “OECD-FAO Agricultural Outlook 2014-2023.”

### **Country Case Studies**

The following pages include country case studies that summarize export opportunities in selected markets. The overviews outline ITA's analysis of the U.S. export potential in each market and offer recommendations to exporters that can improve their competitiveness. The markets represent a range of countries to illustrate a variety of points – and not the top five markets overall.

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# Canada

Type: Strategic Market; High Volume, Large Market Share

Canada remains a top market for U.S. exporters of all sizes. It is by far the largest export market for U.S. agricultural equipment. U.S. exports in 2014 totaled \$3.6 billion. Machinery and equipment used to cultivate grain and other commodity row crops dominate U.S. sales to Canada. As a result of falling prices for those commodities, U.S. agricultural equipment exports dropped sharply in 2014 as Canadian grain farmers cut their investments in new equipment. Although exports to the livestock and fresh produce sectors increased, they were unable to compensate for declines in the row-crop sector.

U.S. Exports\*:  
1

Export Growth\*:  
8

U.S. Import Market  
Share: 70.2%

\*Note: Ranking based on a comparison of U.S. exports to forty strategic markets including signatories of major trade agreements and all members of the European Union and the Organization for Economic Cooperation and Development.

ITA expects U.S. agricultural exports to Canada will decline in 2015, although at a slower rate than in the previous year. In 2016, exports are likely to flatten out and may grow modestly, as global grain prices stabilize and Canadian farmers cautiously move to replace older equipment.

## Overview

Canada is a strategic market for U.S. agricultural equipment exporters, given the country's large and highly advanced agricultural economy, proximity to the United States, and status as a North American Free Trade Agreement (NAFTA) trading partner. U.S. exports account for 70 percent of Canadian imports. Strong domestic and third-country competitors challenge U.S. suppliers across all major categories of agricultural equipment sold in Canada.

Canada is by far the United States' largest export market for agricultural equipment, worth \$3.6 billion in 2014. Machinery and equipment for producing grains, oilseeds, and other commodity row crops represented 43 percent of total U.S. exports, worth \$1.6 billion. Exports related to livestock and fresh produce represented 6.6 and 2.4 percent of total exports, respectively, worth \$237.3 million and \$87.0 million. Exports of tractors in the 40-100hp and less than 40hp ranges, combined, accounted for 8 percent of exports worth \$288.2 million. Agricultural sprayers represented less than two percent of overall exports. Exports of parts, at 23.2 percent of the total, worth

\$838.3 million, were proportional to global U.S. exports in this category.

Despite the market's importance, exports to Canada fell sharply in 2014, declining 17.3 percent from the previous year. This was due in large part to the steep decline in grain prices beginning in 2011-2012, combined with the Canadian market's strong orientation to machinery and equipment for producing grains and oilseeds (rapeseed/canola, wheat, soybeans, corn, etc.), and other row crops (potatoes, lentils and other legumes, beans, etc.).

## Canada: Major Crops

- Grains oilseeds, and other row crops: rapeseed/canola, wheat, soybeans, corn, barley, oats, linseed potatoes, lentils, dry peas, dry beans (50.0 percent).
- Poultry (23.3).
- Red Meat (11.3).
- Dairy: fresh milk (11.0).
- Other: blueberries, tomatoes, mushrooms and truffles (2.6).

(Percentage share of the top 20 commodities produced in 2012, by value; Source: U.N. Food and Agriculture Organization.)

Increases in U.S. exports to the much smaller livestock sector (5.8 percent), as well as the 40-100hp and less-than-40hp tractor segments, were insufficient to mitigate the overall decline.

Parts exports fell even more steeply in 2014 than total agricultural equipment shipments to Canada, however. Overall parts exports declined 28.3 percent last year. Parts exports encompass both the demand for after-markets parts and components from dealers and their customers, and the requirements of Canada's robust agricultural equipment manufacturing sector.

The decline in U.S. parts exports is likely due to the impact of falling commodity prices on Canada's domestic agricultural equipment industry. Major manufacturers in Canada include Buhler Industries (100+ hp tractors; Winnipeg, Manitoba), MacDon Industries (harvesting equipment; Winnipeg), and CNH-Industrial's Case-IH and New Holland business units (implements and sprayers; Saskatoon, Saskatchewan and Niagara Falls, Ontario).<sup>8</sup>

In a recent survey, Canadian agricultural equipment dealers expected slightly negative revenue growth in 2015. The dealers believed best sales prospects included agricultural implements, such as disc harrows and field cultivators, as well as farm loaders and precision agriculture technology. Big ticket items, such as combine harvesters, 4-wheel drive tractors, and self-propelled sprayers, were ranked last.<sup>9</sup>

Despite the sharp downturn in 2014, Canada will remain a strategic market for U.S. exporters of agricultural equipment. U.S. exports to Canada tripled over the ten years ending in 2012, growing at an annual rate of 11.5 percent. The country is a major global producer and exporter of staple crops that will remain in high demand around the world. Canada's large farms and high-technology agricultural practices are very well-suited for American products, regardless of the ups and downs of global commodity markets.

Canada has a highly productive agricultural economy. The country is a leading global exporter of wheat, rapeseed (canola), rapeseed oil, and dried peas. Like the United States, and other developed, industrial countries, agriculture represents less than two percent of GDP. Only two percent of the workforce is employed in agriculture. Arable land represents less than five percent of the total land area, which is substantial given the geographic size of Canada.

### **Major Canadian Farm Shows**

#### **Agri-Trade Exposition**

Red Deer, Alberta  
[www.agri-trade.com](http://www.agri-trade.com)

#### **Canada's Farm Progress Show**

Regina, Saskatchewan  
[www.myfarmshow.com](http://www.myfarmshow.com)

#### **Western Canadian Crop Production Show**

Saskatoon, Saskatchewan  
<http://www.cropproductiononline.com/>

#### **Canada's Outdoor Farm Show**

Guelph, Ontario  
[www.outdoorfarmshow.com](http://www.outdoorfarmshow.com)

#### **Ottawa Valley Farm Show**

Ottawa, Ontario  
[www.ottawafarmshow.com](http://www.ottawafarmshow.com)

Canadian agricultural is highly mechanized and very capital intensive. Precision agricultural technology—to maximize the productivity of agricultural inputs and farming methods—is in especially high demand, in light of the extremely price-sensitive nature of international markets for Canadian agricultural commodities. These characteristics, plus the large farms found in many parts of the country, suit U.S. machinery very well for the Canadian market.

### **Impact of Commodity Prices**

Since 2011-12, easing global demand for key agricultural commodities and high yields on increased acreage for Canada's leading grain crops have resulted in significantly lower prices for the country's farmers. At the same time, the cost of production inputs remains a concern. As a result, most Canadian farmers are likely to hold off making significant new investments in machinery and equipment until at least 2016.

The impact of declining grain prices is mitigated somewhat by higher global prices for meat, and since mid-2014, declining petroleum prices which are likely to reduce the cost of fuel in 2015.

### **Market Access/Trade Barriers<sup>10</sup>**

Barriers to U.S. agricultural equipment exports to Canada are negligible. Canada eliminated tariffs on all industrial and most agricultural products imported from the United States in 1988. In 2010, Canada announced the unilateral elimination of import tariffs on manufacturing inputs. Most tariffs were eliminated

immediately and the remainder will be eliminated by 2015.

Determining whether a specific product qualifies for duty-free status under the NAFTA Rules of Origin can be complex. As a result, the U.S. Department of Commerce created the [NAFTA Certificate of Origin Interactive Tool](#). An explanation of NAFTA certificates of origin, as well as a “What’s My Tariff” tool, can be found at: <http://export.gov/FTA/nafta/index.asp>.

Exports to Canada must be properly documented for customs purposes; customs regulations and information are available from the Canada Border Services Agency webpage at [www.cbsa-asfc.gc.ca](http://www.cbsa-asfc.gc.ca).

The United States and Canada maintain different regulations regarding product labeling. The requirement that Canadian label information be provided in English and French creates extra costs for U.S. exporters.

End-user prices of U.S. products and services to Canadian customers, in Canadian dollars, are substantially affected by exchange rate changes between the U.S. dollar and the Canadian dollar. The value of the U.S. dollar hovers near parity in relation to the Canadian dollar. Canadian buyers are price-sensitive. U.S. should have price lists denominated in Canadian currency.

Canada remains on the U.S. government’s Special 301 Watch list due to concerns over its protection of intellectual property rights. U.S. copyright or patent

protection does not automatically provide equivalent protection in Canada. Companies should seek guidance and advice from local attorneys or intellectual property specialists.

For more information on doing business in Canada, consult ITA’s “Doing Business in Canada: 2014 Country Commercial Guide for U.S. Companies,” [www.buyusainfo.net/docs/x\\_5578582.pdf](http://www.buyusainfo.net/docs/x_5578582.pdf)

Many U.S. agricultural equipment manufacturers already maintain extensive dealer networks in Canada and exhibit—often through their dealers—at Canadian farm equipment shows.

Among the leading Canadian farm shows, the U.S. Foreign and Commercial Service in Calgary, Alberta notes that **Canada’s Farm Progress Show** (Regina, Saskatchewan) is the country’s largest agricultural equipment exhibition; the success of the show is highly dependent on the weather, however, since heavy rain can interrupt the harvest season and limit event participation. The **Western Canadian Crop Production Show** (Saskatoon, Saskatchewan) is the leading farm show in Saskatchewan—often referred to as Canada’s “breadbasket”—and neighboring provinces; the show’s focus is on grain industry and field equipment directly related to crop production. Historically, only a handful of U.S. firms have routinely attended the **Agri-Trade Exposition** (Red Deer, Alberta); however, a new Show Manager is in place for the 2015 show and recruitment for greater U.S. participation is likely.

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# Mexico

Type: Strategic Market; High Volume, Large Market Share

Mexico is a leading export market for U.S. agricultural equipment and was the United States' second-largest market overall in 2014. U.S. exports last year totaled \$1.1 billion—double their value in 2009—and grew 6.1 percent over the previous year. Mexico is a major market both for original equipment and for parts. U.S. exports of original equipment reflect the diversity of Mexico's agricultural economy, which is a major producer, consumer, and exporter of a wide range of fruits, vegetables, orchard crops, and other high-value commodities. Parts exports reflect the country's status as a major manufacturing center. Mexico is a top market for U.S. exporters of all sizes. As a NAFTA partner, barriers to U.S. exports are negligible.

U.S. Exports\*:  
2

Export Growth\*:  
8

U.S. Import Market  
Share: 68.8%

\*Note: Ranking based on a comparison of U.S. exports to forty strategic markets including signatories of major trade agreements and all members of the European Union and the Organization for Economic Cooperation and Development.

ITA expects U.S. agricultural equipment exports to Mexico will grow modestly in 2015, on the strength of the country's fresh-produce and livestock sectors, which enjoy growing demand in the domestic and international markets, as well as the more domestically focused dairy sector. This trend is likely to continue in 2016, as global grain prices stabilize and farmers in the grain and row crop sector move to replace older equipment.

## Overview

Mexico is a strategic market for U.S. agricultural equipment exporters. Shipments from the United States account for 69 percent of the Mexican import market. The country's agricultural economy is large and modernizing rapidly. Mexico's proximity both to U.S. equipment manufacturers and U.S. markets for its agricultural exports are a major advantage.

As a North American Free Trade Agreement (NAFTA) trading partner, trade barriers in Mexico are negligible. Major U.S. and European manufacturers produce tractors, agricultural implements, and other equipment in Mexico. As a result, strong third-country competitors challenge U.S. suppliers across all the major categories of agricultural equipment sold in Mexico.

Mexico is the United States' second-largest export market for agricultural equipment, worth \$1.1 billion

in 2014. Exports related to fresh produce and livestock represented 11.8 and 8.1 percent of total exports, respectively, worth \$127.5 million and \$88.1 million. Agricultural sprayers accounted for 7.6 percent of total exports, worth \$82.2 million.

Unlike other very large markets (i.e., Canada and Australia), machinery and equipment for producing grain, oilseeds, and other commodity row crops represented only 11.9 percent of total exports, worth \$128.5 million. Exports of tractors in the 40-100hp and less than 40hp ranges were a very small percentage of overall exports.

## Mexico: Major Products

- Fresh Produce & Spices (27.1 percent)
- Red Meat (26.9)
- Poultry (20.2)
- Dairy (11.6)
- Grains oilseeds, and other row crops: (7.4).
- Other: cotton, sugar cane (6.8).

(Percentage share of the top 20 commodities produced in 2012, by value; Source: U.N. Food and Agriculture Organization.)

Exports of agricultural equipment parts to Mexico represent a disproportionately large share of U.S. exports, relative to global U.S. parts exports. Parts exports to Mexico were worth \$577.1 million in 2014, 53.3 percent of total exports—twice their share of overall U.S. agricultural equipment exports. Exports of parts rose 6.1 percent in 2014.

Nearly 80 percent of total parts exports were for agricultural tractors. This fact reflects the major manufacturing operations located in Mexico. John Deere manufactures tractors in the 105-140hp range in Saltillo. CNH Industrial's New Holland division manufactures tractors in the 90-115hp range in Queretaro. Both companies also produce implements and other agricultural equipment at these and other locations in Mexico.<sup>11</sup>

Exports to Mexico grew 6.1 percent in 2014. This was due to continued growth in the fresh-produce and livestock segments. The steep decline in grain prices beginning in 2011-2012 has had relatively little impact on U.S. exports to Mexico, since grains, oilseeds, and other row crops account for a relatively small share of the country's agricultural production.

U.S. exports to the fresh produce sector grew 16.7 percent in 2014, to \$127.5 million. Exports to the livestock sector surged, growing 40.1 percent to \$88.1 million. Shipments of agricultural sprayers rose 17.7 percent, to \$82.2 million. Exports of 40-100hp and less-than-40hp tractor segments were mixed, with a total volume of less than two percent.

Mexico has a diversified agricultural economy with significant opportunities for growth. The country is a leading global exporter of tomatoes, avocados, green chilis, dry onions, sugar, and a variety of other fresh and frozen fruits and vegetables<sup>12</sup>. Agriculture represents only a small part of Mexico's economy, 3.5 percent of GDP, which is characteristic of other leading U.S. export markets for agricultural equipment.<sup>13</sup>

Unlike other leading agricultural equipment export markets, however, a relatively large portion of Mexico's workforce is employed in agricultural production: 14.7 percent.<sup>14</sup> This indicates a strong potential for further mechanization.

Mexico is well-positioned as a growth market for U.S. agricultural equipment exports in 2015 and 2016. Expanding economies both domestically in Mexico and in the United States<sup>15</sup> will support growing consumer

demand for the fresh produce, red meat, poultry, and dairy products that account for a large portion of Mexico's agricultural production.<sup>16</sup>

The fresh produce sector will benefit from its access to a strengthening U.S. economy and consumers' ability to include fresh fruits and vegetables in their diets. The U.S. Food Safety Modernization Act (FSMA) will begin to make itself felt, as Mexican growers find themselves compelled to invest in irrigation and related water-management technology, improved packing-house systems, and related equipment to comply with stringent new sanitary requirements on imported foodstuffs [See Box, Page 7].

Mexican growers will expand their exports to China and other Asian markets, as well. This is likely to result in both expanded production, and an increasing need to meet those markets' expectations for food safety. U.S. manufacturers can provide equipment to meet these requirements.<sup>17</sup>

In 2014, the President of Mexico announced programs worth more than \$7 billion to provide water to more than 1.3 million hectares of land to support agribusiness.<sup>18</sup>

Mexico's red meat and poultry production is likely to increase in the near term. Improving profitability in the beef sector, lower feed prices, enhanced genetics for pigs, and strong bio-sanitary practices and ongoing consolidation among poultry producers will all contribute to this growth.<sup>19</sup>

Dairy production is also likely to increase modestly in 2015, as a result of lower costs for feed, more integrated production, and improved herd genetics. Mexico's dairy producers struggle to compete with lower-priced imports from the United States.<sup>20</sup> Nevertheless, the sector is strong enough to attract significant investment, such as a recently-announced six-year, \$53 million program by Nestlé of Switzerland. Nestlé will fund development of milk production and infrastructure and technical assistance in the milk and whey supply chains.<sup>21</sup>

#### Market Access/Trade Barriers<sup>22</sup>

Mexico imposes no tariffs on goods imported from the United States that meet NAFTA rules-of-origin requirements. Determining whether a specific product qualifies for duty-free status under the NAFTA Rules of Origin, however, can be complex and there are a number of exceptions. As a result, the U.S. Department

of Commerce created the [NAFTA Certificate of Origin Interactive Tool](#). An explanation of NAFTA certificates of origin, as well as a “What’s My Tariff” tool, can be found at: <http://export.gov/FTA/nafta/index.asp>.

For more information on doing business in Mexico, consult ITA’s “Doing Business in Mexico: 2014 Country Commercial Guide for U.S. Companies,”: [www.buyusainfo.net/docs/x\\_7553099.pdf](http://www.buyusainfo.net/docs/x_7553099.pdf)

Exports to Mexico must be properly documented for customs purposes. The basic Mexican import document is the "pedimento de importación," which is required for all cross-border shipments.

Other essential documents include a commercial invoice (in Spanish), a bill of lading, documents demonstrating guarantee of payment of additional duties for undervalued goods if applicable, and documents demonstrating compliance with Mexican product safety and performance regulations.

Use of a customs broker for import transactions is no longer required. Import documentation may be prepared and submitted by a licensed Mexican customs broker, or by an importer with sufficient experience in completing the documents.

Mexican law is very strict, however, regarding proper preparation and submission of customs documentation. Errors can result in fines and even confiscation of merchandise as contraband. In practice, custom broker services may still be needed to import from the United States.

**Major Trade Events**  
**International Production  
& Processing Expo**

Atlanta, Georgia  
[ippexpo.org](http://ippexpo.org)

**World Ag Expo**  
Tulare, California  
[worldagexpo.com](http://worldagexpo.com)

**Expo Agroalimentaria**  
Irapuato, Guanajuato State, Mexico  
[www.expoagroto.com](http://www.expoagroto.com)

**The Irrigation Show  
& Education Conference**  
Long Beach, California (2015)  
[www.irrigation.org/IrrigationShow/](http://www.irrigation.org/IrrigationShow/)

The Customs Processing Fee (CPF) is no longer assessed on NAFTA-compliant goods imported “definitively” into Mexico. Goods temporarily imported for processing and re-export may be subject to the CPF, since they are not considered “definitive.”

Temporary imports for manufacturing or repair under the IMMEX (Manufacturing, Maquila, and Export Services Industry) program are subject to the payment of duties, taxes, and fees. Temporary imports for trade shows, conventions, or other purposes that will be returned to the United States in the same condition can enter at no charge.

Mexico also imposes a value-added tax on most sales transactions, including sales of foreign products. The VAT rate is 16 percent, although it can vary from 25 to 160 percent depending on the product.

Despite recent improvements, U.S. exporters continue to be concerned about Mexican Tax Administration Service procedures. These concerns include insufficient prior notification of procedural changes, inconsistent interpretation of regulatory requirements at different border posts, and uneven enforcement of Mexican standards and labeling rules.

The United States and Mexico maintain different regulations regarding product labeling. All products intended for retail sale in Mexico must bear a label in Spanish prior to their importation into Mexico.

Many U.S. agricultural equipment manufacturers already maintain extensive dealer networks in Mexico and exhibit—often through their dealers—at farm equipment shows and other trade exhibitions in Mexico and the United States.

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# Australia

Type: Strategic Market; High Volume, Large Market Share

Australia is a leading export market for U.S. agricultural equipment. It is the United States' largest market outside North America and was the third-largest overall in 2014. U.S. exports last year totaled \$785.7 million, a decline of 4.3 percent from the previous year. Australia primarily imports original equipment; exports of parts are largely for after-market sale. Equipment for the grain and oilseed sector dominates U.S. exports to Australia, although the country is also a market for a wide range of machinery to produce fruits, vegetables, orchard crops, and other high-value commodities. Australia is a top market for U.S. exporters of all sizes. As a result of the U.S.-Australia Free Trade Agreement (AUSFTA), barriers to U.S. exports are negligible.

U.S. Exports\*:  
3

Export\* Growth:  
18

U.S. Import Market  
Share: 51%

\*Note: Ranking based on a comparison of U.S. exports to forty strategic markets including signatories of major trade agreements and all members of the European Union and the Organization for Economic Cooperation and Development.

ITA expects U.S. agricultural equipment exports to Australia will decline slightly again in 2015, due largely to weak global prices for grain and oilseeds. Exports to the country's livestock and fresh-produce sectors are likely to rise, however, on the strength of robust demand for higher-value food products in Australia's Asian export markets. Total exports may grow modestly in 2016, as global grain and oilseed prices stabilize and the livestock and produce sectors expand their sales in Asian markets. Low commodity prices and Australia's prolonged drought will continue to depress farm income overall, however—and with it, many farmers' ability to invest in new machinery and equipment.

## Overview

Australia is a strategic market for U.S. agricultural equipment exporters. Shipments from the United States account for 51 percent of the Australian import market.<sup>23</sup> The country's agricultural economy is highly capital-intensive and makes extensive use of advanced technologies. Australia is a leading global supplier of commodities such as wheat, barley, rapeseed, cotton, and a wide range of fruits, vegetables. The country also exports a large and growing volume of higher-value products to major Asian economies. Australia is attracting significant foreign investment in agriculture from China, the Middle East, and

elsewhere. Dairy is a major growth sector. Production of tree nuts—especially almonds and macadamias—is increasing rapidly as well. The on-going drought in California is boosting investment in almond production in particular.

U.S. agricultural equipment is highly regarded and widely available. As a result of AUSFTA, trade barriers are negligible. A very small domestic agricultural equipment industry does not represent significant competition. Nevertheless, strong third-country competition from Asian and European manufacturers challenge U.S. suppliers across all the major categories

## Australia: Major Products

- Red Meat (33.6 percent).
- Grains, oilseeds, and other row crops: (25.9).
- Dairy (11.8).
- Fresh Produce & Spices (10.4).
- Poultry (6.6).
- Other: cotton, sugar cane (9.0).

(Percentage share of the top 20 commodities produced in 2012, by value; Source: U.N. Food and Agriculture Organization.)

of agricultural equipment sold in the Australian market.

Australia is the United States' third-largest export market for agricultural equipment, worth \$785.7 million in 2014<sup>24</sup>. Exports related to grain, oilseed and row-crop commodity production were worth \$337.9 million in 2014 and represented 43 percent of total U.S. exports. Exports to the fresh produce and livestock sectors represented 6.4 and 3.2 percent of total exports, respectively, worth \$50.9 million and \$25.8 million. Agricultural sprayers accounted for 4.8 percent of total exports, worth \$36.2 million.

Exports of tractors in the 40-100hp and less than 40hp ranges were a very small percentage of overall exports.

Australia's small domestic agricultural equipment manufacturing industry is not a significant market for U.S. parts exports. U.S. parts exports to Australia were worth \$197.5 million in 2014, 25.1 percent of total exports.

Exports of U.S. agricultural equipment to Australia declined 4.3 percent in 2014. This was due to the steep world-wide decline in grain prices beginning in 2011-2012. Equipment exports have not been helped by the declining value of the Australian dollar vis-à-vis the U.S. dollar since 2013.<sup>25</sup>

Grains, oilseeds, and other row crops account for a quarter of the total value of Australia's top 20 agricultural products [see box]. This sector also accounts for more than 40 percent of U.S. agricultural equipment exports. U.S. exports to the sector fell 12.7 percent last year, which had a major impact on U.S. agricultural equipment trade with Australia overall. Exports of agricultural sprayers declined even more sharply, by 43.7 percent, to \$36.2 million.

The decline in sales to Australian grain farmers was mitigated somewhat by growth in exports to other sectors of the country's agricultural economy. U.S. exports to the fresh produce sector rose 2.3 percent in 2014, to \$50.9 million. Exports to the livestock sector expanded as well, rising 6.8 percent to \$27.5 million. Shipments of agricultural parts grew 13.8 percent, to \$197.5 million. Exports of 40-100hp and less-than-

40hp tractors were mixed, with a total volume of less than one percent.

New technologies are of great interest to Australian farmers. In a country where labor is scarce and expectations for food safety are high, robotics for the dairy sector and self-propelled equipment will be well-received. Equipment for irrigation and improved water-management is another area of opportunity for innovative technologies. Unmanned aerial vehicles (UAVs) adapted for agriculture will also find application in Australia.

Agricultural equipment is sold in Australia to roughly 134,000 commercial farms through a network of dealers estimated to number 604 in 2013. Of those dealers, nearly 60 percent are part of groups with two or more outlets. Distribution channels have become much more concentrated in recent years. Single-store dealerships are becoming rare, while overseas dealers are moving into the market.<sup>26</sup>

U.S. exporters need to take account of Australia's unique geography. Australia is as large as the continental United States. On the other hand, the population is only 1/15<sup>th</sup> that of the United States and is concentrated in the major coastal cities. Seasons are the reverse of the northern hemisphere. In agricultural regions, towns and cities typically have 5,000 – 150,000 inhabitants, and are served by correspondingly small- to medium-sized businesses.

Given Australia's geography, U.S. exporters should be prepared to develop regional or state-based dealer relationships. Western Australia, which is quite remote from the eastern States, should be considered a discrete market in its own right.<sup>27</sup>

The outlook for Australia's agricultural equipment market in 2015-16 is complex. The livestock—beef, dairy, poultry, and pork—and produce sectors are poised to grow in the near term and beyond. Grain and oilseeds are likely to stagnate, however. New capital investment will be required to enable Australian growers to make the most of expanding export opportunities—and intensifying competition—in China, Japan, and elsewhere.<sup>28</sup>

## Major Trade Events

### Domestic

#### **Big Iron Farm Show**

Fargo, North Dakota  
[bigironfarmshow.com](http://bigironfarmshow.com)

#### **The Farm Progress Show**

Boone, Iowa  
[farmprogress.com/](http://farmprogress.com/)

#### **International Production & Processing Expo**

Atlanta, Georgia  
[ippexo.org](http://ippexo.org)

#### **The Irrigation Show**

Long Beach, California (2015)  
[www.irrigation.org/irrigationshow/](http://www.irrigation.org/irrigationshow/)

#### **World Ag Expo**

Tulare, California  
[worldagexpo.com](http://worldagexpo.com)

### International

#### **CRT FarmFest**

Toowoomba, Queensland  
[www.farmonline.com.au/events/farmfest/](http://www.farmonline.com.au/events/farmfest/)

#### **Commonwealth Bank Ag-Quip Field Days**

Gunnedah, New South Wales

#### **Dowerin Field Days**

Dowerin, Western Australia  
[www.dowerinfielddays.com.au/](http://www.dowerinfielddays.com.au/)

#### **Elmore Field Days**

Elmore, Victoria  
[www.elmorefielddays.com.au/](http://www.elmorefielddays.com.au/)

#### **Henty Field Days**

Henty, New South Wales  
[hmfd.com.au/](http://hmfd.com.au/)

#### **International Dairy Week**

Tatura, Victoria  
[internationaldairyweek.com.au/](http://internationaldairyweek.com.au/)

#### **Irrigation Australia**

Mascot, New South Wales  
[irrigation.org.au](http://irrigation.org.au)

#### **New Zealand National Ag Field Days**

Hamilton, New Zealand  
[www.fieldays.co.nz/](http://www.fieldays.co.nz/)

#### **Wimmera Machinery Field Days**

Horsham, Victoria

Growth in Australia's agricultural economy is forecast to lag behind GDP, private consumption, and the industrial and service sectors of the national economy in 2015 and 2016. Still, this represents an improvement over negative growth in 2014, estimated by the Economist Intelligence Unit at -2.0 percent. Further depreciation in the value of the Australian dollar relative to its U.S. counterpart is likely.<sup>29</sup> Australia's recent trade agreements with Korea, Japan, and China and the opportunities they create for Australian farmers will drive growth in U.S. agricultural equipment exports in years to come. The Australian Government is aggressively pursuing a bilateral trade agreement with India and several multi-lateral agreements including the Trans-Pacific Partnership.

The Korea-Australia Free Trade Agreement (KAFTA), entered into force on December 12, 2014. The Australian Department of Foreign Affairs and Trade reports that half of Australia's agricultural exports were able to enter Korea duty-free at that time. Tariffs will be eliminated on 98 percent of Australian exports when KAFTA is fully implemented. Tariffs were eliminated immediately on many types of fruits and

vegetables, wine, wheat and wheat gluten, and sugar. Tariffs will be eliminated progressively on beef and other red meat, cheese, butter, and other types of fruits, vegetables, and higher value crops.<sup>30</sup>

The Japan-Australia Economic Partnership Agreement (JAIPA), which took effect January 15, 2015, will eliminate or reduce many Japanese tariffs on Australia's most important high-value agricultural exports. Other products will benefit from various types of preferential access to the highly-regulated Japanese market. A total of 19 "Australian-only" tariff rate quotas (TRQs) will be available for 19 agricultural products.<sup>31</sup>

Treatment of Australian agricultural products varies widely under JAIPA. For numerous fruits and vegetables, tree nuts, citrus and other orchard and tropical fruits, the agreement provides for immediate or phased-in elimination of Japanese tariffs. In some cases, other forms of preferential access are granted instead. Tariffs will also be eliminated on many categories of processed fruits and vegetables, juices, confectionary, honey, tea, and other products.<sup>32</sup>

In the case of meat and dairy products, JAEPA significantly reduces tariffs for beef and related products and eases other restrictions as well. Australian pork and poultry will receive improved quota treatment. Dairy provisions extend duty-free or other preferential quotas, and in some cases eliminate tariffs for cheese and certain processed dairy products.<sup>33</sup>

On November 17, 2014, Australian Trade and Investment Minister Andrew Robb and his Chinese counterpart signed a Declaration of Intent to sign the China-Australia Free Trade Agreement (ChAFTA), following the completion of negotiations.<sup>34</sup>

According to the Australian Department of Foreign Affairs and Trade, when fully implemented ChAFTA would remove all Chinese tariffs on dairy products, beef, live animals, mutton and lamb, produce, and barley. Phase-in for tariff elimination would vary by product, from immediately for barley, to nine years for beef and four to 11 years for produce. Chinese tariffs would also be eliminated on a variety of processed foods, including fruit juice and honey.<sup>35</sup>

The Australian Government believes that ChAFTA will provide a significant advantage for Australian agricultural exports over their leading international competitors, including the United States, Canada and the European Union. More defensively, the agreement may counter the advantages currently enjoyed in the Chinese market by Chile and New Zealand as a result of those countries' FTAs with China.<sup>36</sup>

On the downside, Australian grain and oilseed producers will continue to suffer from declining global commodity prices through 2015. Recovery in this sector is unlikely before 2016, when commodity prices can be expected to stabilize.

In addition to shrinking farm income, many Australian growers are burdened with heavy debt. To a considerable extent, this is a result of reduced income resulting from long-term drought. The extension of drought conditions is a major long-term threat to Australian agriculture. Consequently, many Australian farmers will remain in a weak position to make significant investments in machinery and equipment.<sup>37</sup>

#### Market Access/Trade Barriers<sup>38</sup>

As a result of AUSFTA, Australian tariffs have been eliminated on 99 percent of U.S. manufactured industrial and consumer goods. To be eligible for

preferential tariff treatment under AUSFTA, imported goods must be obtained or produced entirely in the United States, or produced in the United States entirely from materials originating in either Australia or the United States. U.S.-manufactured goods may also qualify for preferential treatment if they are produced in part from materials obtained from third countries. However, these materials must meet the requirements of the AUSFTA rules of origin with respect to the level of source content, and/or the type of physical transformation that occurs during manufacturing.

The Australian Customs and Border Protection Service has sole jurisdiction to clear imports, including determinations regarding rules of origin. Local importers are responsible for obtaining formal Customs clearance for goods.

The most frequently used method of valuing goods for customs purposes is transaction value, which is based on the price actually paid (or payable) for the imported goods subject to certain adjustments. Valuation of imported goods can be complex and importers should consult a customs broker or contact Australian Customs.

Although virtually all U.S.-origin goods may enter Australia duty-free, imports may still be subject to the Goods and Services Tax (GST). Other charges may apply, as well. The importer is liable for the 10 percent GST on both new and second-hand goods. The amount paid or payable for international transport and insurance is included in GST-taxable import value.

Goods may be brought into Australia on a temporary basis without the payment of duty or taxes for up to twelve months. Product samples and goods imported for display at trade fairs are eligible for temporary import. Goods covered under the provisions of certain international agreements to which Australia is a party are also eligible for admission.

Customs does not require companies or individuals to hold import licenses, but importers may need to obtain permits to clear their goods. The basic documentation required for customs clearance includes a completed Customs Entry or Informal Clearance Document and an air waybill or bill of lading. Invoices and other documents relating to the transaction are required, as well. Normal commercial invoices, bills of lading, and receipts are acceptable.

As a WTO Member, Australia is a party to the WTO multilateral agreements including the General Agreement on Tariffs and Trade (GATT) and the Agreement on Technical Barriers to Trade (TBT), which includes the Code of Good Practice for the Preparation, Adoption and Application of Standards.

Standards developed by the International Organization for Standardization (ISO) are in common use. Standards Australia is the country's leading standards development organization and is Australia's member body to ISO, the International Electrical Commission (IEC), and the Pacific Area Standards Congress (PASC). Although not a government agency, Standards Australia is widely recognized as the leading standards development body in Australia. In partnership with SAI Global Ltd., Standards Australia provides standards and related products.

For more information on doing business in Australia, consult ITA's "Doing Business in Australia: 2013 Country Commercial Guide for U.S. Companies," [www.buyusainfo.net/docs/x\\_8698727.pdf](http://www.buyusainfo.net/docs/x_8698727.pdf)

Agricultural trade shows—known as “field days”—are the principle means of showcasing agricultural

equipment in Australia. These events are held for the most part from February through November (i.e., during winter in the Southern Hemisphere). The largest event is the Commonwealth Bank Ag-Quip Field Days in Gunnedah, New South Wales. A number of others, however, are significant events in their own right [see box]. The New Zealand National Ag Field Days in Hamilton, New Zealand should also be noted as the largest regional event. A calendar of events can be found at <http://farmyard.net.au/>.

CRT FarmFest and the New Zealand show are staged a week apart in June; as are Ag-Quip and Dowerin Field Days in August; presenting two prime opportunities for U.S. agricultural equipment manufacturers to visit or exhibit.

In the United States, Australian farmers and equipment dealers are regular visitors to events such as the Farm Progress, World Ag Expo and the Big Iron Farm Show. The International Production and Processing Expo is another event with significance for Australian market.<sup>39</sup>

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# Brazil

Type: Dynamic Growth Market; High Volume, High Market Share

Brazil is an important market for U.S. agricultural equipment, despite an array of protectionist trade measures. Brazil is a major producer, consumer, and exporter of a wide range of agricultural products. U.S. agricultural equipment exports to Brazil nearly tripled between 2009 and 2014. The Brazilian market has weakened since 2012, as a result of sharply lower grain prices, a depreciating currency, and a weak domestic economy. Year-on-year exports decreased by 29 percent from 2012 to 2013, and fell again by 6 percent from 2013 to 2014. Nevertheless, the fundamentals of Brazil's agricultural economy remain strong and the country will continue to be a major market for U.S. agricultural equipment.

U.S. Exports\*:  
1

Export Growth\*:  
5

U.S. Import Market  
Share:  
53.0%

\*Note: Ranking based on a comparison of U.S. exports to five large dynamic growth markets: Brazil, China, Russia, South Africa, and Ukraine.

ITA expects that U.S. exports of agricultural equipment to Brazil will decline in 2015, and quite possibly in 2016 as well. Exports of equipment to produce grain, oilseeds, and other commodity crops, as well as parts and components, will be especially weak. The livestock sector will likely benefit from falling feed prices and other favorable market conditions, however, and exports to this sector are likely to enjoy modest growth.

## Overview

Brazil is a dynamic growth market for U.S. agricultural equipment exporters. The volume of U.S. exports has been high, and growth rapid, for much of the past decade. Shipments from the United States account for 53 percent of the Brazilian import market. Brazil has a large and diverse agricultural economy with considerable scope for mechanization. That said, the country's protectionist trade policies hinder stronger and more sustained growth in U.S. exports.

Brazil was the United States' fourth-largest export market for agricultural equipment in 2014, worth \$485 million. This is down 6 percent from \$517 million in 2013, and even more from a record high of \$729 million in 2012. There are a variety of reasons for the decline in U.S. exports. From January 2011 to January 2014, the Brazilian real declined by nearly 50 percent relative to the U.S. dollar<sup>40</sup>, effectively cutting the purchasing power of Brazilian importers in half. World grain prices, after peaking in 2011-2012, have fallen

significantly, which has reduced farmers' ability to invest in equipment. Slowing growth in the Chinese market has impacted Brazilian commodity exports as well.

Despite recent setbacks, as the fifth largest country in the world by area, the sixth largest by population, and seventh largest economy, Brazil remains an important market for agricultural equipment. It is a globally significant producer, consumer, and exporter of commodities including red meat, soybeans, sugar cane, and poultry. Large amounts of land are still available for agricultural cultivation in the cerrado (savannah) regions of the country.<sup>41</sup> Nearly 15 percent of the country's labour force is employed in agriculture.<sup>42</sup> All these facts are indicative of the significant further

## Brazil: Major Products

- Red Meat (24.3 percent)
- Grains, oilseeds and other row crops (19.7 percent)
- Sugar Cane (18.5 percent)
- Poultry (14.4 percent)
- Dairy (7.9 percent)

(Percentage share of the top 20 commodities produced in 2012, by value; Source: U.N. Food and Agriculture Organization.)

opportunity for mechanization that characterizes the Brazilian agricultural equipment market.

Equipment for producing grain, oilseeds, and other commodity row crops represented nearly 28.5 percent of total U.S. agricultural equipment exports to Brazil in 2014. This sector has experienced significant volatility over the past three years. In 2012, when commodity prices were at their peak, U.S. exports to Brazil in this sub-sector reached almost \$285 million. In 2013, however, U.S. exports of the same products dropped to only \$72 million, with the steepest losses occurring in large-horsepower tractors, combine harvesters, and agricultural implements. The sub-sector actually recovered somewhat in 2014, with exports rising to \$138 million.

Parts and components account for more than half of all agricultural equipment exports to Brazil. This is a disproportionately large share, compared to 33 percent parts and components for global U.S. agricultural equipment exports. Parts exports to Brazil were worth \$244 million in 2014 and accounted for 50.4 percent of total exports to the country.

The large role parts play in U.S. agricultural equipment exports to Brazil reflects the major manufacturing operations located there. For example, John Deere manufactures high-horsepower tractors in Catalão, Montenegro, and Horizontina. CNH-Industrial's New Holland division manufactures tractors, combine harvesters, and sprayers at facilities in Rio Verde, Curitiba, Piracicaba, and Sorocaba. Other agricultural equipment companies with manufacturing operations in Brazil include AGCO, Agrale, Caterpillar, Komatsu, and Valtra.<sup>43</sup>

Exports to the livestock sector represented 4.3 percent of total exports in 2014, worth \$21 million. Red meat is a signature Brazilian commodity, and beef exports remain one of Brazil's economic strengths.<sup>44</sup> This sector probably will continue to grow with the worldwide decline in feed prices and continued U.S. and European Union sanctions on the Russian Federation.

U.S. exports to the fresh produce sector declined 11 percent in 2014, to \$46 million. Agricultural sprayers accounted for less than one percent of total exports, worth \$4.4 million, and exports of 40-100hp and less-than-40hp tractor segments were negligible in the

Brazilian market, accounting for less than 0.1 percent of agricultural equipment exports.

Despite overall negative trends in year-on-year exports, Brazil will remain an important market for U.S. agricultural equipment exports for the foreseeable future. From 2009 to 2014, U.S. exports increased at an annual rate of 21.7 percent. While Brazil's slowing economy will limit growth of overall domestic food consumption, the country's large population continues to provide a market for processed food and beverage products and their inputs.<sup>45</sup>

#### Market Access/Trade Barriers<sup>46</sup>

The Brazilian market poses a number of significant challenges, and doing business in Brazil requires a thorough knowledge of local practices. Brazil has a democratic and federal system of government, like many other advanced economies. Transparency in government remains a concern, however, and jurisdictional power between federal and state entities can be difficult to navigate.

As a result, many agricultural equipment manufacturers have developed robust in-country networks of partnerships and subsidiaries to manage these challenges.<sup>47</sup> For more information on doing business in Brazil, consult ITA's "Doing Business in Brazil: 2014 Country Commercial Guide for U.S. Companies," [www.buyusainfo.net/docs/x\\_1919553.pdf](http://www.buyusainfo.net/docs/x_1919553.pdf)

#### Tariffs

Brazilian trade policies are generally protectionist and are intended to foster domestic industry by managing inputs and outputs. As a member of MERCOSUR (the "Southern Common Market" made up of Argentina, Brazil, Paraguay, Uruguay, and Venezuela), Brazil maintains a Common External Tariff (CET) schedule for products originating outside of the common market. For exports originating from Most-Favored-Nation (MFN) markets, rates vary widely from zero to 35 percent, with an average applied rate of 13.5 percent in 2012.<sup>48</sup> Brazil's WTO bound tariff rates are 35 percent for industrial products, and can reach 55 percent for certain agricultural products.<sup>49</sup> The government is given broad latitude to increase or decrease tariffs to achieve desired policy goals. Such wide disparities in applied and bound rates contribute to significant uncertainty in projecting total costs of exports to Brazil.

### Indirect-Taxation

Numerous nontariff barriers present challenges to U.S. exporters of agricultural equipment, as well. Brazil's federal and state tax codes are complex and give preferential incentives to locally manufactured products. Tax rates on certain imports can effectively double the actual cost of goods. A 25 percent merchant marine tax levied on ocean freight originating outside of MERCOSUR nations can be particularly challenging for importers of large capital equipment.<sup>50</sup>

### Standards & Technical Regulations

A variety of Brazilian government agencies issue technical regulations for agricultural machinery. Like the United States, Brazil regulates products for occupational health and safety reasons, as well as for environmental protection. Technical regulations generally are published in the Diário Oficial da União

(the Official Gazette, equivalent to the U.S. Federal Register) and given a period of time for comments and public hearings. When a technical regulation is believed to impact international trade, Brazil's National Institute of Metrology, Quality, and Technology (INMETRO) is responsible for notifying the WTO to allow parties to comment.<sup>51</sup>

### Intellectual Property Rights

While the country has made progress in the enforcement of intellectual property rights, Brazil has remained on the USTR Special 301 Watch List for the last 9 years. With respect to exports, Brazil is noted primarily for its high levels of counterfeiting and piracy in sectors such as information and communication technology, pharmaceuticals, and agrochemical products.<sup>52</sup> While concerns over the theft of intellectual property are not as common in the agricultural equipment sector as they may be in other sectors, exporters should be aware of this classification and take steps to protect themselves.

### Major Trade Events

#### Domestic

##### **Big Iron Farm Show**

Fargo, North Dakota

[bigironfarmshow.com](http://bigironfarmshow.com)

##### **Farm Progress Show**

Boone, Iowa

[farmprogressshow.com](http://farmprogressshow.com)

##### **International Production and Processing Expo**

Atlanta, Georgia

[ippexo.org](http://ippexo.org)

##### **The Irrigation Show & Education Conference**

Long Beach, California (2015)

[www.irrigation.org/IrrigationShow/](http://www.irrigation.org/IrrigationShow/)

##### **World Dairy Expo**

Madison, Wisconsin

[www.worlddairyexpo.com](http://www.worlddairyexpo.com)

#### International:

##### **Agri-Show**

Ribeirao Preto, Sao Paulo, Brazil

[www.agrishow.com.br/en/](http://www.agrishow.com.br/en/)

##### **International: Expodireto Cotrijal,**

Não-Me-Toque, Rio Grande do Sul, Brazil

[www.expodireto.cotrijal.com.br](http://www.expodireto.cotrijal.com.br)

### Infrastructure

Infrastructure remains a challenge for exporters of large or extremely bulky equipment. Lack of good roads in rural areas can add significant cost to farm production, resulting in diminished purchasing power among end-users.<sup>53</sup> Poor roads and limited railroad capacity increase freight costs and must be factored into doing business in Brazil.<sup>54</sup> This is particularly relevant to the agricultural equipment sector, which is primarily clustered in rural and lesser developed areas. Disparities between lesser and more developed regions can have a significant impact on transporting big-ticket items, particularly in the agricultural equipment sector.

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# China

Type: Dynamic Growth Market; High Volume, Large Market Share

China is a large and important market for U.S. exporters of agricultural equipment, one that presents both significant opportunities and formidable challenges. U.S. exports in 2014 totaled \$376.1 million.<sup>55</sup> Although growth has been substantial and sustained for more than a decade, exports in several major product categories fell sharply last year. Exports in the livestock and produce sectors increased, but they were unable to compensate for declines elsewhere. The Chinese Government's role in the agricultural economy—unique among major agricultural equipment markets—and its aggressive efforts to favor and promote domestic manufacturers will continue to present challenges for U.S. exporters. U.S. companies, especially SMEs, should consider carefully whether or not China is a suitable market for their business.



\*Note: Ranking based on a comparison of U.S. exports to five large dynamic growth markets: Brazil, China, Russia, South Africa, and Ukraine.

Total U.S. agricultural equipment exports to China will likely fall again in 2015, although not as sharply as last year, due to continued weakness in global grain prices. Stabilizing commodity prices will improve prospects for U.S. exporters in 2016. Exports of equipment for the livestock sector will remain a growth area for U.S. exporters. Fresh produce and other high-value food products represent an area of opportunity, especially as Chinese producers position themselves to comply with the U.S. Food Safety Modernization Act (FSMA). Significant risk will continue to characterize the Chinese market for U.S. exporters – even as the world's largest agricultural economy mechanizes itself at a rapid pace.

## Overview

China is a large market for U.S. agricultural equipment exporters with significant potential for future growth. U.S. exports to China grew at an annual rate of 21.7 percent from 2004 to 2013. Although shipments to China declined in 2014, there are strong reasons to believe the Chinese market will return to robust growth in the future.

The country is in the midst of an historic transformation from traditional, labor-intensive farming practices to mechanized, high-technology agriculture. A variety of forces drive this transformation. The Chinese Government, which effectively owns and operates the country's farm

sector, has made mechanizing agriculture and moving rural inhabitants to urban areas a top policy objective. Behind this policy lie China's changing demographics, limited agricultural land and water resources, the Chinese population's increasingly varied dietary preferences, and the high priority the government continues to attach to food security.

The opportunities presented by the rapid mechanization of the world's largest agricultural economy have to be balanced against the challenges faced by U.S. exporters doing business in China.

## China: Major Crops

- Fresh Produce and other high-value products: tomatoes, apples, garlic, mushrooms and truffles, cucumbers and gherkins, watermelons, chilis and green peppers (28.7 percent).
- Red Meat (25.8).
- Grains oilseeds, and other row crops: rice, wheat, potatoes, corn, peanuts (23.8).
- Poultry (14.0).
- Dairy: fresh milk (3.2).

(Percentage share of the top 20 commodities produced in 2012, by value; Source: U.N. Food and Agriculture Organization.)

These challenges include an array of Chinese Government policies, local business practices, and the cost—and attendant business risk—of simply establishing business operations in China before significant sales can be realized.

The Chinese Government’s “Strategic Emerging Industries” industrial policy identifies agricultural equipment as a priority industry.<sup>56</sup> As a result, a variety of policies favor local manufacturers and products over imports. Although China does offer patent protection to foreign products, theft of intellectual property is widespread within China’s borders and beyond. A robust, effective business presence in China can mitigate some of these risks. Nevertheless, the cost—informally estimated at \$500,000 over at least a three-year period—can be prohibitive for many SME exporters.

U.S. manufacturers hold a 43.5 percent share of China’s import market for agricultural equipment.<sup>57</sup> Taking into account domestic production, however, ITA estimates that imports from the United States represent less than two percent of a total Chinese market that may be worth as much as \$8.8 billion. Despite their substantial position in the import market, strong and growing competition from domestic manufacturers and well-established third-country competitors challenge U.S. suppliers across all major categories of agricultural equipment sold in China.<sup>58</sup>

In 2014, China was United States’ sixth-largest export market for agricultural equipment, worth \$376.1 million. Machinery and equipment for producing grains, oilseeds, and other commodity row crops represented 38.1 percent of total U.S. exports, valued at \$143.2 million. Exports related to livestock and fresh produce represented 18.8 and 9.0 percent of total exports respectively, amounting to \$70.8 million and \$33.7 million. Exports of parts, at 34.2 percent of the total and with a value of \$128.8 million, are proportional to global U.S. exports in this category. Exports of agricultural sprayers and tractors in the 40-100hp and less-than-40hp ranges together accounted for less than one percent of U.S. exports.

Exports to China fell sharply in 2014, declining by 23.3 percent from the previous year. This followed the steep decline in global grain prices that began in 2011-2012. It is consistent with falling exports in other markets where machinery and equipment for producing grains and oilseeds and other row crops are a large portion of U.S. exports.

U.S. shipments of agricultural equipment parts fell at almost the same rate in 2014—22.4 percent—as total agricultural equipment exports to China. Export performance in the broad parts segment varied widely in 2014, with strong growth in parts for highly specialised equipment such as milking machinery, seeders and planters, and certain tractor components. Weak 2014 results notwithstanding, exports of parts have grown strongly in recent years, at annual rate of more than 27 percent from 2009 to 2014.

Parts exports reflect not only the demand for after-market parts and components, but also the rapidly evolving character of China’s agricultural equipment manufacturing sector.<sup>59</sup> A downturn in domestic demand certainly contributed to this. However, the global decline in agricultural equipment trade—and Chinese exports— is also likely to have reduced Chinese demand for imported parts.

Equipment exports to China’s livestock sector continued to show strong growth, up 23.8 percent in 2014. This is consistent with 27 percent annual growth from 2009 through 2014. Performance was flat in the produce sector, with U.S. exports down 0.6 percent for the year. The on-going decline in exports of agricultural sprayers accelerated in 2014, with shipments from the United States worth only \$1.5 million. Exports of 40-100hp and less-than-40hp tractors were negligible.

China’s domestic agricultural equipment industry is characterized by a large number of largely unspecialized manufacturers producing low-technology machinery. The domestic industry is described by an authoritative Chinese source as having “the technology level of their counterparts in the developed countries in the 1970s.” The industry has a “loose and chaotic” structure, with “large enterprises not...strong and small enterprises not specialized.”<sup>60</sup>

Competition is intense, especially among domestic manufacturers of lower-technology products.<sup>61</sup> The presence of leading international manufacturers only adds to the competitive character of the market.<sup>62</sup> As recently as 2011, the China Agricultural Machinery Distribution Association (CAMDA) estimated that the top five domestic manufacturers accounted for less than 25 percent of the market.<sup>63</sup> Major Chinese agricultural equipment companies include First Tractor, the YTO Group, Foton Lovol, and Changzhou Dongfeng Agricultural Equipment.<sup>64</sup>

Leading U.S. and international manufacturers with investments in China include the AGCO Corporation, Deere & Company, the Claas Group (Germany), CNH Industrial (Italy), and the Kubota Corporation (Japan). AGCO manufactures agricultural tractors, harvesting machinery, diesel engines, and systems for grain-storage, poultry, and swine production at plants in Shanghai, Changzhou, Yangzhou, and Daqing. Deere manufactures agricultural tractors, corn harvesters, and engines at factories in Harbin, Jiamusi, Ningbo, and Tianjin. Claas Jinyee Agricultural Machinery manufactures agricultural tractors and combine harvesters in Gaomi and Daqing. CNH Industrial manufactures agricultural tractors, combine harvesters, cotton and sugar cane harvesters, and other equipment at facilities in Harbin, Guangzhou, Shanghai, Foshan, and Urumqi. Kubota manufactures agricultural equipment in Suzhou and engines in Shanghai and Wuxi.<sup>65</sup>

The Chinese Government is taking aggressive measures to support and modernize the domestic agricultural equipment sector. Industrial policy goals include consolidating the structure of the industry around “five globally competitive large enterprise groups” with annual sales of RMB15 billion each; developing more technologically advanced, higher-capacity products, such as high horse-power (100hp and up) tractors; developing core industrial technologies, such as more sophisticated transmissions, engines, and electronic controls; improving product quality, and locating joint research and development facilities with foreign companies in China.<sup>66</sup>

The most direct competitive impact of China’s industrial policy for U.S. agricultural equipment exporters is the extensive system of subsidies provided to farmers for the purchase of domestically-manufactured products. Since the subsidies were introduced in 2004, their scope has expanded to more than 175 types of machinery. In 2012, government-designated subsidies for purchasing agricultural machinery were worth \$3.5 billion. Equipment eligible for subsidies includes tractors, harvesting machinery, planters, agricultural implements, and farm dairy machinery. Decisions on what equipment to subsidize are made at the provincial and local level. Imported products are not eligible for subsidies.<sup>67</sup>

Despite the sharp downturn in 2014, China will remain an important market for U.S. exporters of agricultural equipment. China has the world’s largest agricultural economy, producing a highly diverse array of food and

fibre, staple commodities and high-value agricultural products. The country is the world’s leading producer of rice, cotton, pork, and a variety of other agricultural products such as fresh eggs, tomatoes, garlic, and watermelons. China ranks among the top three producers of a many other products including wheat, corn, chicken meat, beef, fresh milk, oranges, and sugar cane.

Significant scope remains for mechanization of this vast agricultural economy. For example, some 35 percent of China’s labor force is employed in agriculture. In comparison, two percent is typical of capital-intensive, high-technology agricultural economies—in North America, the European Union and the OECD—that take most U.S. exports of agricultural equipment.<sup>68</sup>

Because subsidies are only available for domestic products, U.S. exporters necessarily will find their opportunities at the high-technology end of the agricultural equipment market and for higher-value food products. Because of Chinese population’s growing taste and ability to afford meat and dairy products, the livestock sector (pork, poultry, dairy, beef) is likely to remain an attractive segment for some time to come.

The produce sector is also a likely growth area for a variety of reasons. As with meat and dairy, China’s urban consumers can afford to eat more fresh produce and processed fruits, vegetables, juices, etc. Demand for will continue to grow as the population shifts from rural areas to the cities.

Chinese consumers are also increasingly conscious of food safety. Significant investment will be required by China’s food processors to meet their growing expectations. In addition, the U.S. Food Safety Modernization Act (FSMA) is also likely to influence Chinese investment in the fresh produce and other high-value sectors.

FSMA will require Chinese exporters of fresh produce, seafood, spices, ingredients and other FDA-regulated food products to the United States to meet—and document that they meet—the same requirements as U.S. domestic producers [See Box on Page 7]. To meet these requirements, growers and processors will have to invest in water treatment for agriculture and food processing, irrigation and packing-house equipment, specialized information technology, and related goods and services.

### Land and Water

A major influence driving mechanization of Chinese agricultural is the need to make the most of scarce agricultural land and water. Although China has roughly 20 percent of the world's population, it possesses only nine percent of the world's farmland and six percent of its freshwater. Freshwater per capita in 2009 was one-third the global average at the time.<sup>69</sup>

Land and water are also located disproportionately in different parts of the country. Sixty-five percent of China's agricultural land is in northern China, which produces half the country's grain and nearly all of its wheat and corn, along with numerous other commodities. Yet, only 20 percent of China's freshwater resources are located in the north.<sup>70</sup>

### Market Access/Trade Barriers<sup>71</sup>

Despite China's accession to the World Trade Organization (WTO) in 2001, extensive barriers remain to U.S. exports in the Chinese market. The U.S. Government works to address these barriers through bilateral dialogue and engagement, active export promotion, and enforcement of U.S. and international trade laws and obligations.

As a member of the WTO, imports from the United States are assessed at China's Most-Favored-Nation (MFN) rate. The five Special Economic Zones, open cities, and foreign trade zones within cities offer preferential duty reductions or exemptions. Companies doing business in these areas should consult the relevant regulations. China may apply tariff rates significantly lower than the published MFN rate in the case of goods that the government has identified as necessary for the development of a key industry.

For customs purposes, the value of an imported product is its Cost, Insurance, and Freight (CIF) price. Customs officers use a database that lists valuations for various imports, based on foreign and domestic market prices. Normally, China Customs will accept the

importer's price. If the reported value deviates significantly from the database however, the value of the goods may be estimated based on methods listed in the relevant Administrative Regulations.

Both foreign and domestic enterprises are required to pay value-added and business taxes. The value-added tax (VAT) is assessed on sales and imports of goods, as well as processing, repairs, and replacement services. Business taxes are levied on providers of services, transfers of intangible assets, and/or the sale of immovable property within China. VAT incorporates the value of the tariff, and is collected on imports at the border.

Inadequacies in China's protection and enforcement of intellectual property rights (IPR) continue to present serious barriers to U.S. exports. China was again placed on the Priority Watch List in the 2015 Special 301 report, and several online and physical markets were named in USTR's 2013 Out-of-Cycle Review of Notorious Markets, which identifies Internet and physical markets that exemplify key challenges in the global struggle against piracy and counterfeiting.<sup>72</sup>

The protection and enforcement of trade secrets in China is also a serious problem. Thefts of trade secrets that benefit Chinese companies occur both within China and beyond its borders. The Chinese Government frequently has failed to recognize serious infringements of IPR that violate Chinese law. Entities affiliated with the Chinese Government and the Chinese military have infiltrated the computer systems of U.S. companies, stealing huge amounts of data, including intellectual property.<sup>73</sup>

For more information on these and other concerns, see the "2014 National Trade Estimate Report on Foreign Trade Barriers," published by the United States Trade Representative, at <https://ustr.gov/sites/default/files/2014%20NTE%20Report%20on%20FTB.pdf>.

## Appendix 1: Market Categories

This study groups export markets for U.S. agricultural equipment into three categories: *Strategic*, *Dynamic Growth*, and *Long-Term Opportunity*. Strategic markets are stable, relatively mature markets in advanced economies that offer high level of market access. Dynamic Growth markets are more volatile, but have demonstrated high rates of growth and relatively high overall volumes of U.S. exports, and offer significant opportunities for further growth. Long-Term Opportunity markets are very small economies that are, growing rapidly and offer significant long-term possibilities for growth, along with considerable volatility.

Strategic markets—because they are politically and economically stable, afford a high degree of market access, and pose relatively low risk—have much to offer any U.S. agricultural equipment manufacturer. Dynamic Growth markets offer—potentially—greater rewards, but also significantly greater risk. U.S. manufacturers should consider carefully the pros and cons for their company of doing business in these markets. Long-term opportunity markets offer high levels of risk, but also—potentially—significant scope for growth in the future; experienced exporters may find these markets attractive.

### ■ **Strategic Markets**

- High volume of U.S. exports as a group, including the largest U.S. export markets in absolute terms, as well as numerous medium-sized and smaller markets.
- Excellent market access, as a result of free-trade agreements with the United States (NAFTA, AUSFTA), or coinciding with membership in the European Union or the Organization for Economic Cooperation and Development (OECD).
- Capital intensive commercial agriculture.
- Widespread application of advanced technologies (GPS, remote sensing, automation, robotics).
- Well-developed agriculture-specific infrastructure, including transportation and storage for agricultural commodities, commercial supply chains, financial services, legal institutions, etc.
- Mature or rapidly maturing as markets.
- As a group, represent approximately 75 percent of total U.S. exports.
- For purposes of this study, Strategic Markets include:

Austria	Hungary	Poland
Australia	Iceland	Portugal
Belgium	Ireland	Romania
Bulgaria	Israel	Slovakia
Canada	Italy	Slovenia
Chile	Japan	Spain
Croatia	Korea	Sweden
Cyprus	Latvia	Switzerland
Czech Republic	Lithuania	Turkey
Denmark	Luxembourg	United Kingdom
Estonia	Malta	
Finland	Mexico	
France	Netherlands	
Germany	New Zealand	
Greece	Norway	

■ **Dynamic Growth Markets**

- High volume of U.S. exports; frequently among the United States' ten-largest export markets.
- Rapid growth; double-digit CAGR 2004-2013.
- Significant scope for further mechanization.
- Market access problematic; no FTAs, trade regimes, customs, etc. often present burdensome tariff and non-tariff barriers to U.S. exports.
- Infrastructure for agriculture less well-developed.
- Intellectual property protection can be weak.
- Political, economic conditions often more volatile than strategic markets.
- Fifteen to 20 percent of U.S. exports.
- For purposes of this study, Dynamic Growth Markets include:

Brazil

China

Russia

South Africa

Ukraine

■ **Long-Term Opportunity Markets**

- High growth, very low volume.
- Significant under-developed capacity for commercial agriculture.
- Trade regimes vary widely.
- Infrastructure for agriculture weak and under-developed.
- Political and economic conditions volatile.
- Approximately 5 percent of U.S. exports.
- Sub-Saharan Africa—other than South Africa—contains many Long-Term Opportunity Markets.

## Appendix 2: Product Sub-Sectors

### I. Equipment for Cultivating Grains, Oilseeds, and other Commodity Row Crops

This sub-sector includes combine harvesters, large horse-power tractors (100-hp and higher), all agricultural implements, center-pivot irrigation equipment, and harvesting equipment for roots and tubers (i.e., sugar beets, potatoes, peanuts, etc.).

Crops relevant to this sub-sector include corn (maize), soybeans, wheat, rapeseed (canola), other small grains (barley, millet, etc.), cotton, sugar beets, potatoes, peanuts, etc.

It is assumed that 100+ hp tractors and all agricultural implements are used for these crops—although there are other applications. Cotton harvesters are included as specialty harvesting equipment in the section for “Equipment for Cultivating Fresh Produce and other High-Value Products.”

### II. Equipment for Raising Livestock

This sub-sector includes machinery and equipment for poultry and farm-dairy use, for producing animal feed and fodder (including forage harvesters, hay balers and related products), and barnyard equipment.

Livestock products relevant to this sub-sector include beef, veal, pork, poultry (chicken, turkey, geese, ducks, etc.), fresh milk (from cows, buffalos, etc.), sheep, goats, etc., as well as feed and fodder.

### III. Equipment for Cultivating Fresh Produce and other High-Value Products

This sub-sector includes specialty harvesting equipment, “other” irrigation equipment (principally drip- and micro-irrigation), horticultural tools, packing-house and other equipment for immediate post-harvest handling of relevant crops.

Relevant crops include fresh fruits and vegetables, orchard fruits, tree nuts, olives, tropical fruits, sugar, coffee, tea, and other specialty crops.

### IV. Small- to Mid-Size Tractors

These tractors have widespread application in agriculture, especially in the Livestock and Produce sub-sectors. There are a variety of non-agricultural applications, as well. Since these applications are so varied, they are considered separately from other major product groups in this study. These tractors are classified in the 40-100hp and less-than-40hp ranges.

### V. Agricultural Sprayers

Agricultural sprayers are used across various sub-sectors. U.S. and international trade data don’t differentiate according to end-use.

### VI. Parts & Components

Parts of agricultural equipment are a major component of U.S. exports. Parts are exported both for after-sales service and, to certain markets, for use in original equipment manufacturing.

### VII. Other Equipment

Products in this category are not subject to analysis in this study. “Other” equipment consists primarily of mowers. Equipment classified as mowers are used in a wide range of agricultural and non-agricultural applications. While some can be identified with specific agricultural or non-agricultural sub-sectors, the

data generally don't differentiate according to end-use. Other products in this category include snow-blowers, gas- and electric-powered weed trimmers and other not easily identified with a particular agricultural end-use.

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