



COLLEGE OF AGRICULTURE & LIFE SCIENCES

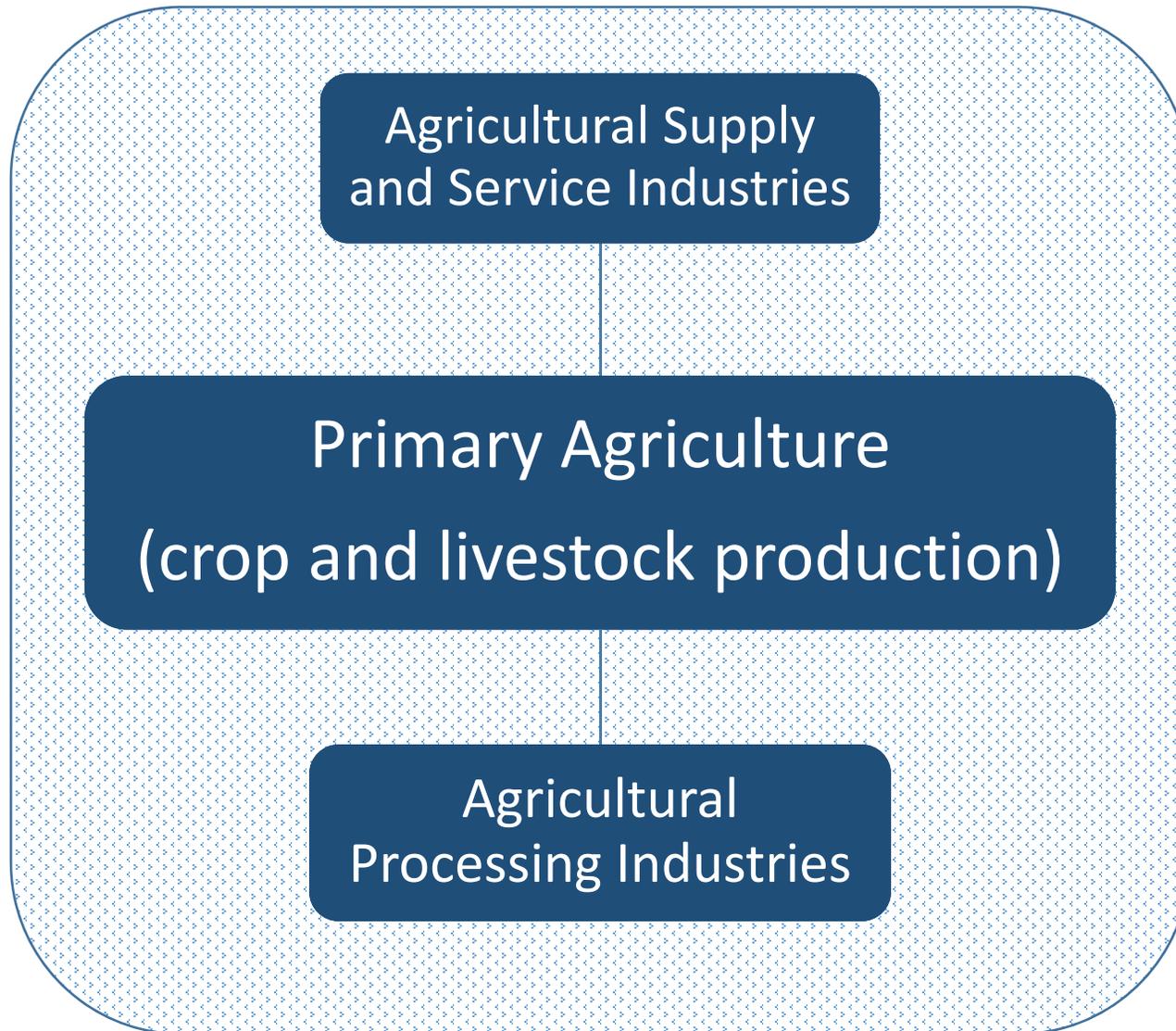
**Cooperative
Extension**

Agriculture in Arizona's Economy

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Arizona Department of Agriculture &
Agribusiness & Water Council of Arizona
First Annual Arizona Agribusiness Roundtable
December 1, 2015

AGRIBUSINESS SYSTEM



AGRIBUSINESS SYSTEM AS A “PORTER INDUSTRY CLUSTER”

The Competitive Advantage of Nations

by Michael E. Porter



**Harvard
Business
Review**

Michael Porter, “Clusters . . .

- Are a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities.
- Encompass an array of linked industries and other entities important to competition.
- Include ... suppliers of specialized inputs ... and services
- Include providers of specialized infrastructure

Michael Porter, “Clusters . . .

- Extend downstream ... and laterally to manufacturers of complementary products or companies related by skills, technologies, or common inputs.
- Include .. institutions (e.g., **universities ... that provide specialized training, education, information, research, and technical support**).
- Include trade associations ...
- Foreign firms can be part of clusters ...if they make permanent investments in a significant local presence.

AGRIBUSINESS AS A SYSTEM

- Cluster of related and synergistic industries
- Starting before and extending beyond the farm
- Land Grant University / Cooperative Extension
supplying knowledge and training people to support
for innovation to many nodes in the larger system

Agriculture's Contribution to Total Output in Arizona: \$17.1 Billion

- Based on data from the 2011 production year, valued in 2014 dollars
- This figure includes the direct contribution of agriculture and agribusiness as well as the **indirect** and **induced** multiplier effects

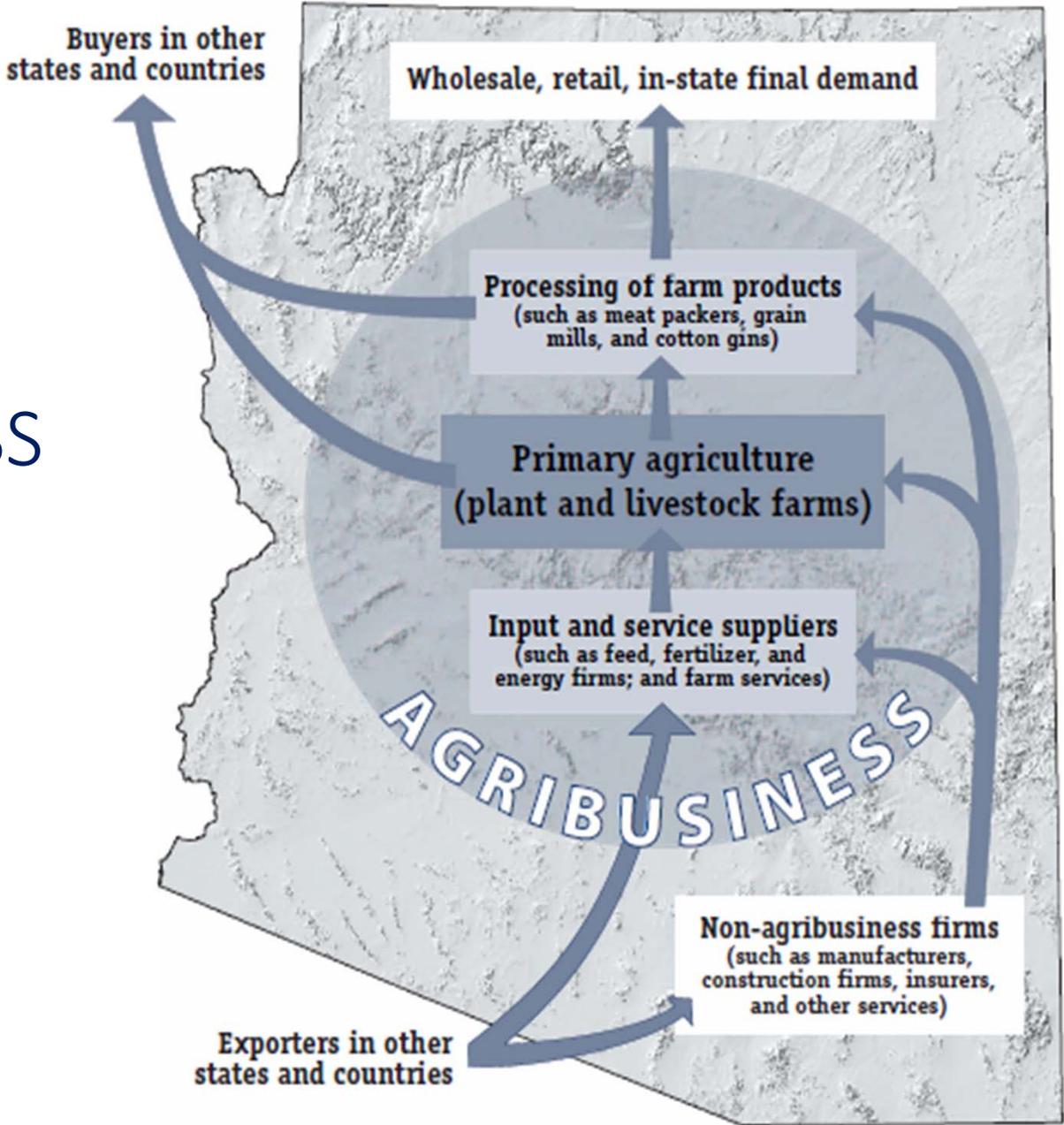
Economic Multipliers

- Indirect Effects
 - Agribusiness industries demand inputs from other industries
 - Those industries demand inputs from yet other industries
 - ... and so on
- Induced Effects
 - Income from agribusiness profits and wages
 - Stimulates demand for consumer goods & services

MULTIPLIER EFFECTS DEPEND ON LINKAGES & LEAKAGES

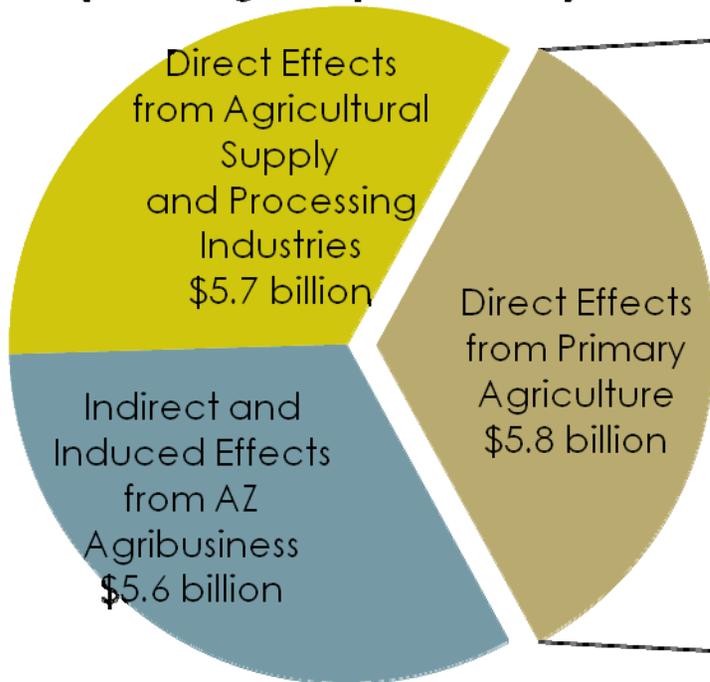
- **Linkages:** how demands for goods and services in one sector affect demands in other sectors
- **Leakages:**
 - How much spending stays within the area of analysis
 - How much “leaks out” of area
 - Example: if you buy a truck in Tucson, most of the money you spent will go back to Detroit or Tokyo

LINKAGES
BETWEEN
AGRIBUSINESS
FIRMS AND
OTHER
INDUSTRIES

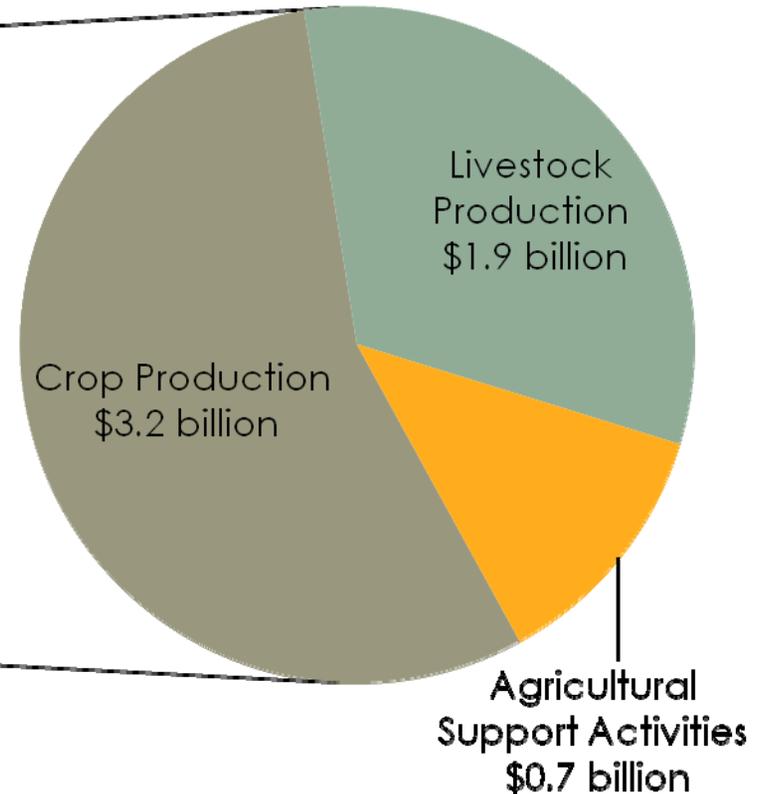


Economic Contribution of the Agribusiness System* to Arizona's State Output, 2011 (presented in 2014 dollars)

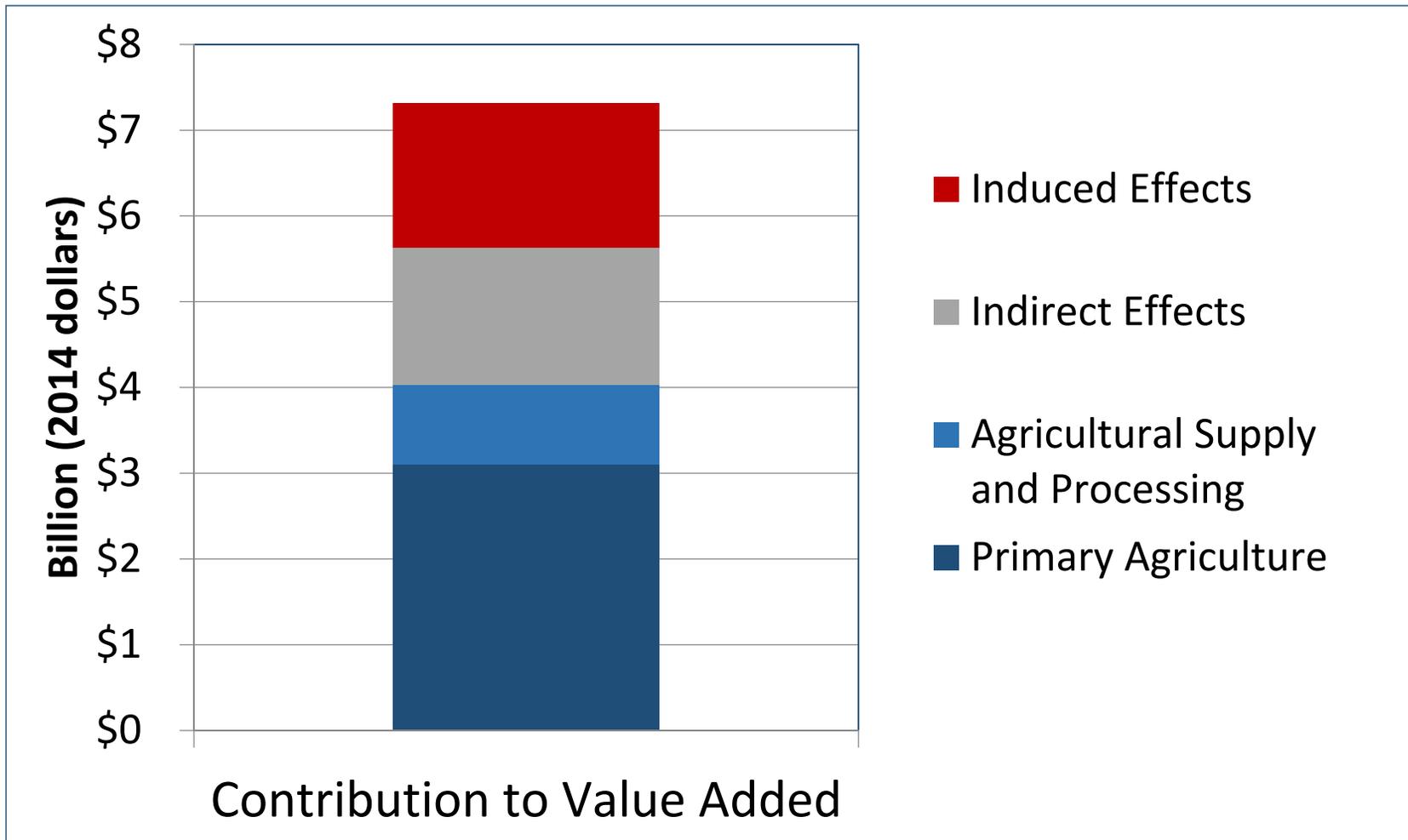
Total Contribution of Arizona Agribusiness System (including multiplier effects)



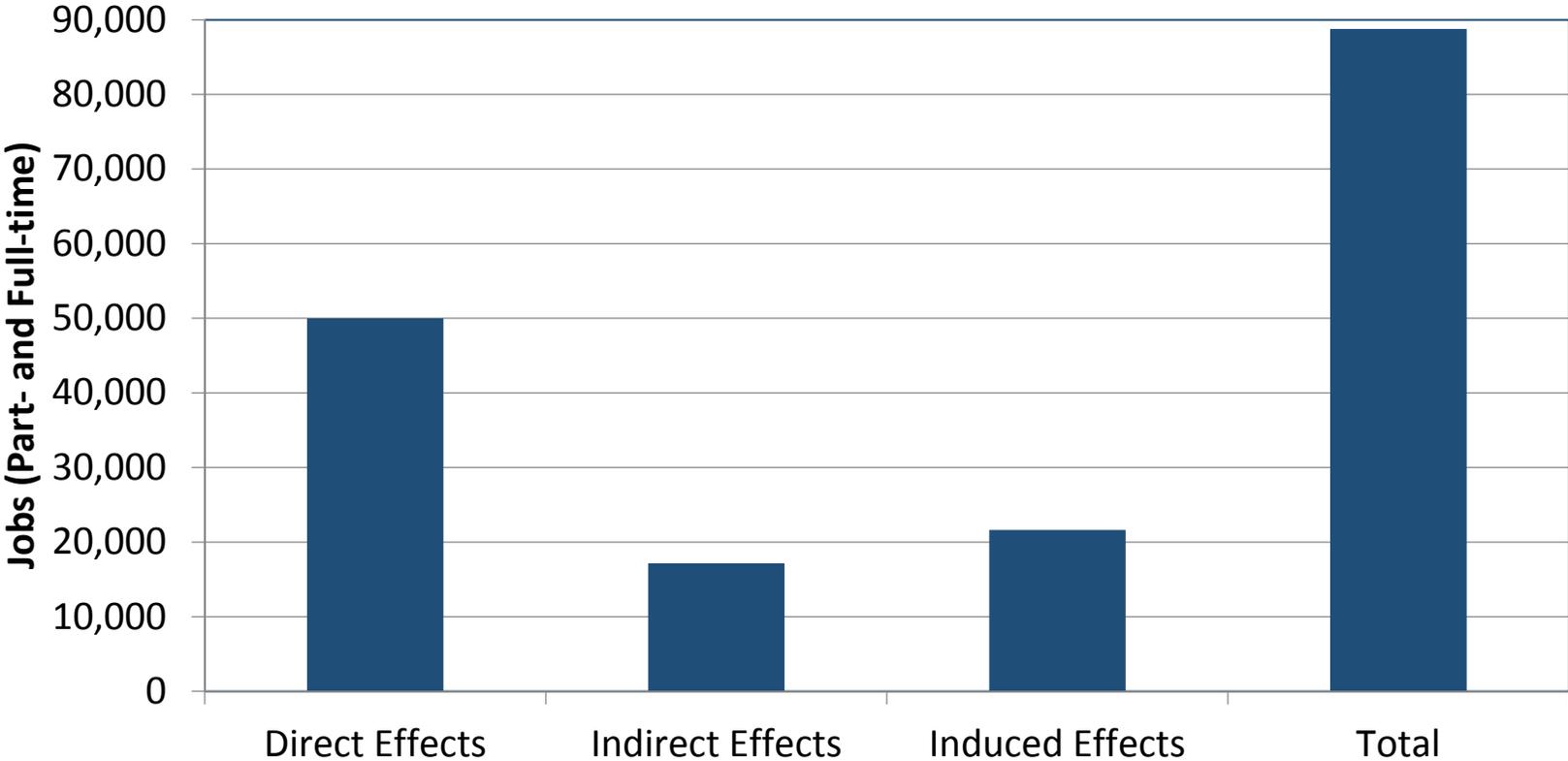
Total Sales by Primary Agricultural Industry



\$7.3 Billion Contribution to AZ Gross Domestic Product (GDP)



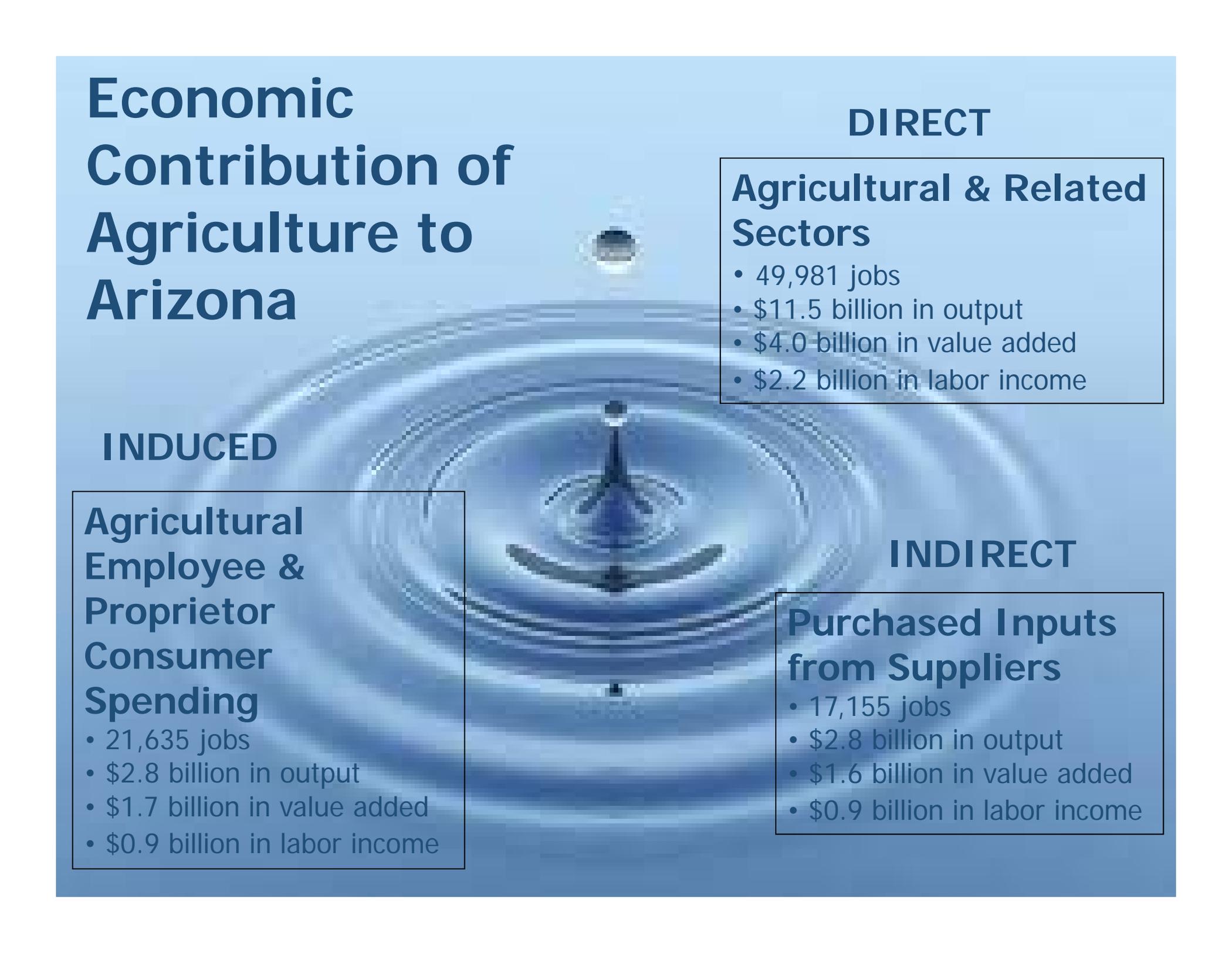
More than 88,000 Jobs Supported



Every 100 agribusiness jobs support an additional 78 jobs in **other industries** in Arizona

	Direct Effects	Indirect Effects	Induced Effects	Total
Total Output (\$ billion)				
<i>All Agribusiness</i>	\$11.5	\$2.8	\$2.8	\$17.1
Primary Agriculture	\$5.8	\$1.1	\$1.7	\$8.6
Supply and Processing	\$5.7	\$1.7	\$1.1	\$8.5
Value Added (\$ billion)				
<i>All Agribusiness</i>	\$4.0	\$1.6	\$1.7	\$7.3
Primary Agriculture	\$3.1	\$0.7	\$1.0	\$4.8
Supply and Processing	\$0.9	\$0.9	\$0.7	\$2.5
Labor Income (\$ billion)				
<i>All Agribusiness</i>	\$2.2	\$0.9	\$0.9	\$4.0
Primary Agriculture	\$1.6	\$0.3	\$0.6	\$2.5
Supply and Processing	\$0.6	\$0.6	\$0.3	\$1.5
Employment				
<i>All Agribusiness</i>	49,981	17,155	21,635	88,771
Primary Agriculture	39,312	6,788	13,404	59,504
Supply and Processing	10,669	10,368	8,231	29,267

Economic Contribution of Agriculture to Arizona



DIRECT

Agricultural & Related Sectors

- 49,981 jobs
- \$11.5 billion in output
- \$4.0 billion in value added
- \$2.2 billion in labor income

INDUCED

Agricultural Employee & Proprietor Consumer Spending

- 21,635 jobs
- \$2.8 billion in output
- \$1.7 billion in value added
- \$0.9 billion in labor income

INDIRECT

Purchased Inputs from Suppliers

- 17,155 jobs
- \$2.8 billion in output
- \$1.6 billion in value added
- \$0.9 billion in labor income

Economic Contribution of Agriculture & Related Sectors to Arizona: Total Effects



88,771 Jobs

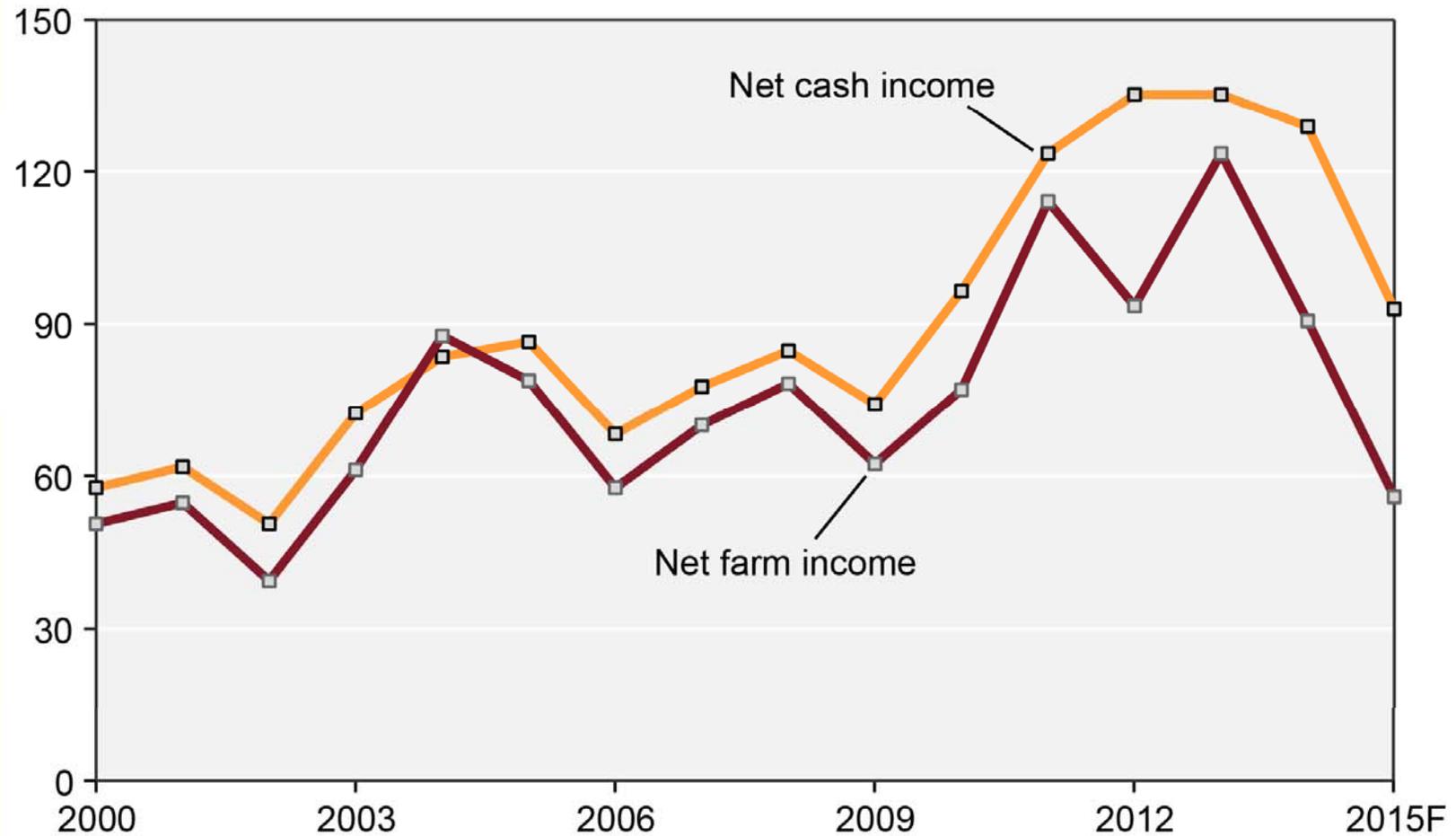
**\$17.1 Billion in
Total Output**

**\$7.3 Billion in
Value Added**

**\$4.0 Billion in
Labor Income**

Net farm income and net cash farm income, 2000-2015F

\$ billion, nominal



Note: F = forecast.

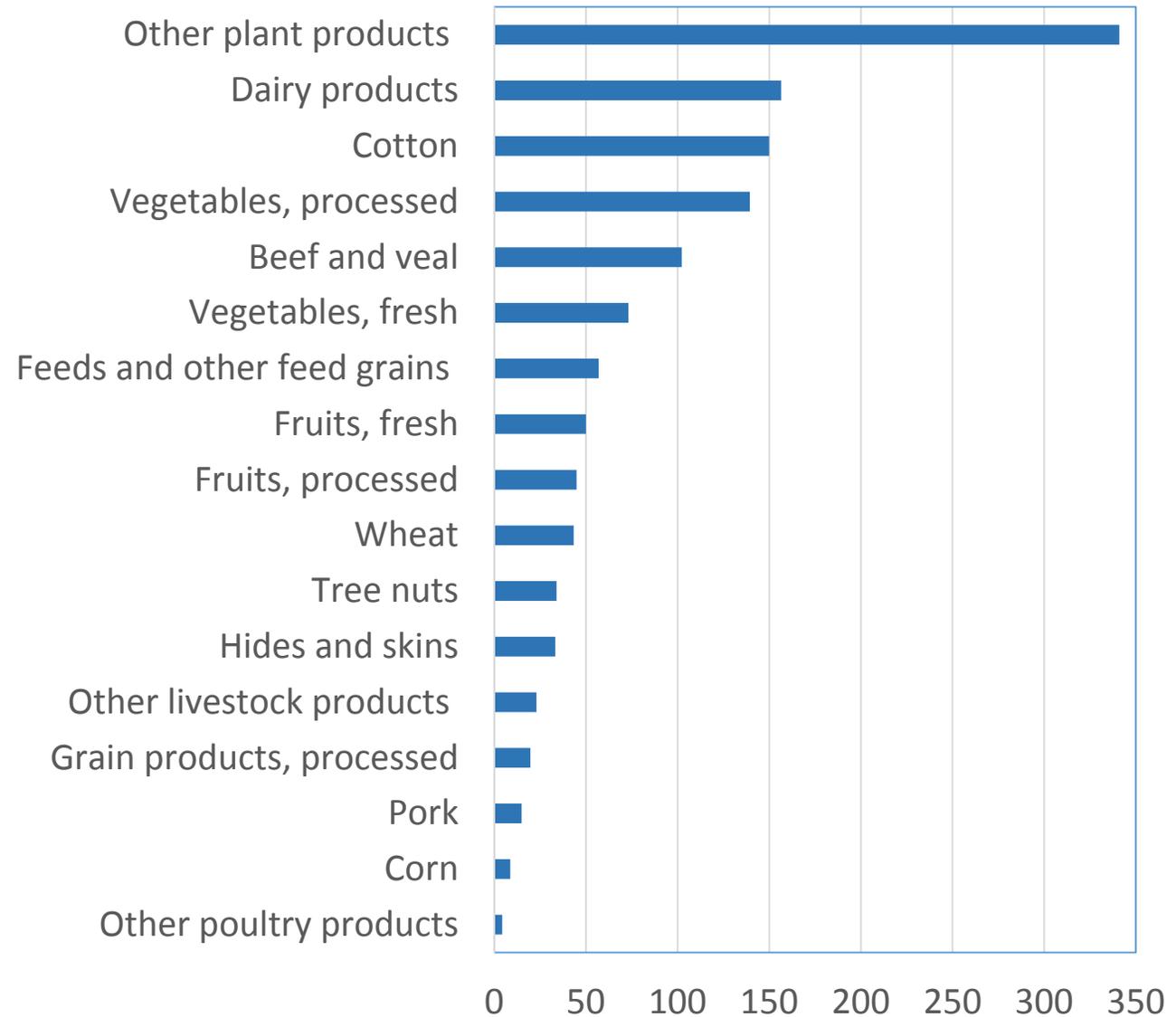
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Data as of November 24, 2015.

USDA Commodity Price Forecasts

	2014/5	2015/6 Oct Proj	2015/6 Nov Proj
Wheat	5.99	4.75 - 5.25	4.80 - 5.25
Barley	5.30	4.65 - 5.45	4.85 - 5.55
Cotton	61.30	54.00 - 64.00	55.00 - 63.00
Steers	149.19	136 - 147	136 - 147
Milk	17.00 - 17.10	16.05 - 16.95	15.95 - 16.85
Corn	3.70	3.50 - 4.10	3.35 - 3.95

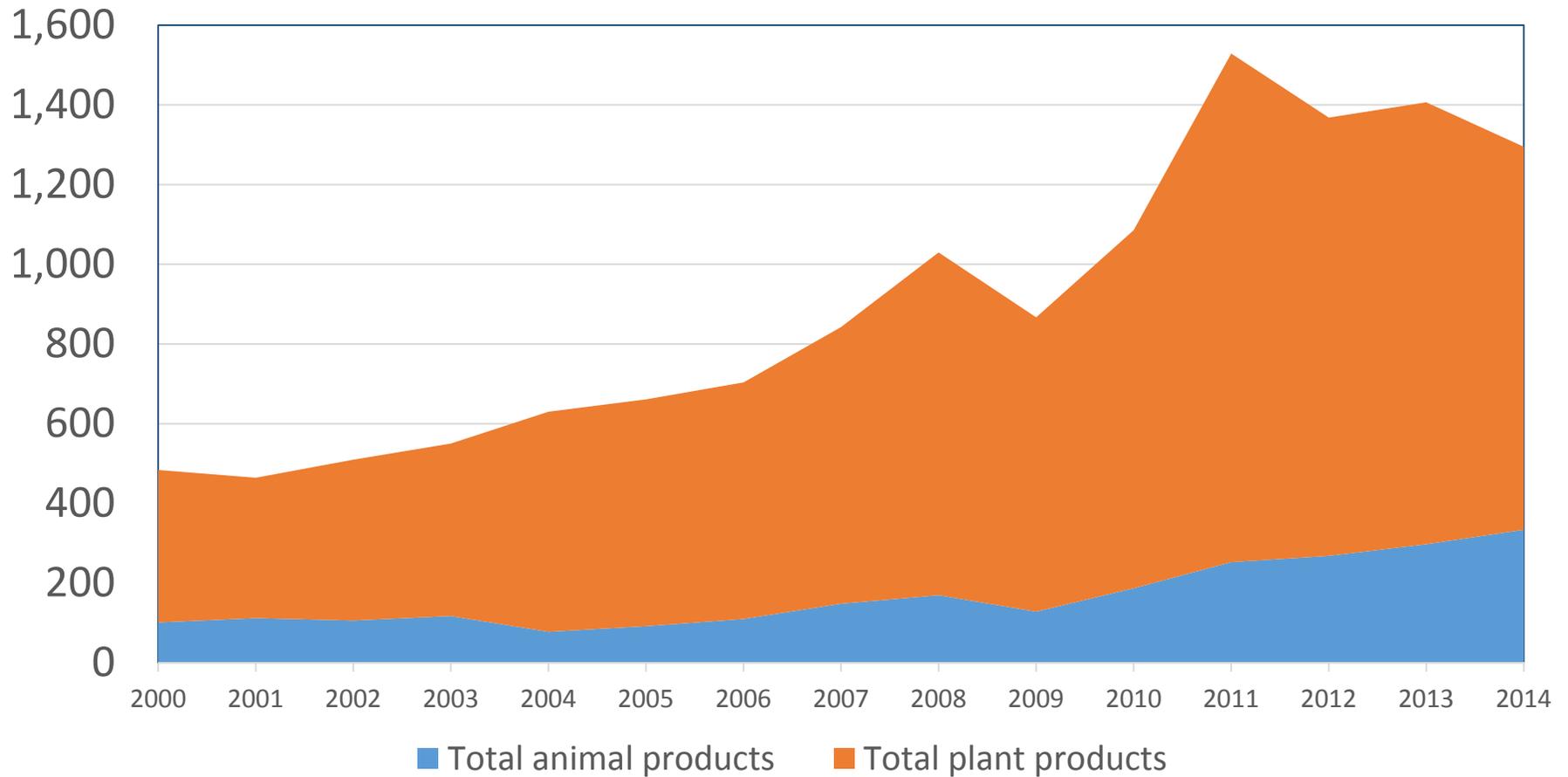
AZ Agricultural Exports

2014 exports
in \$ millions



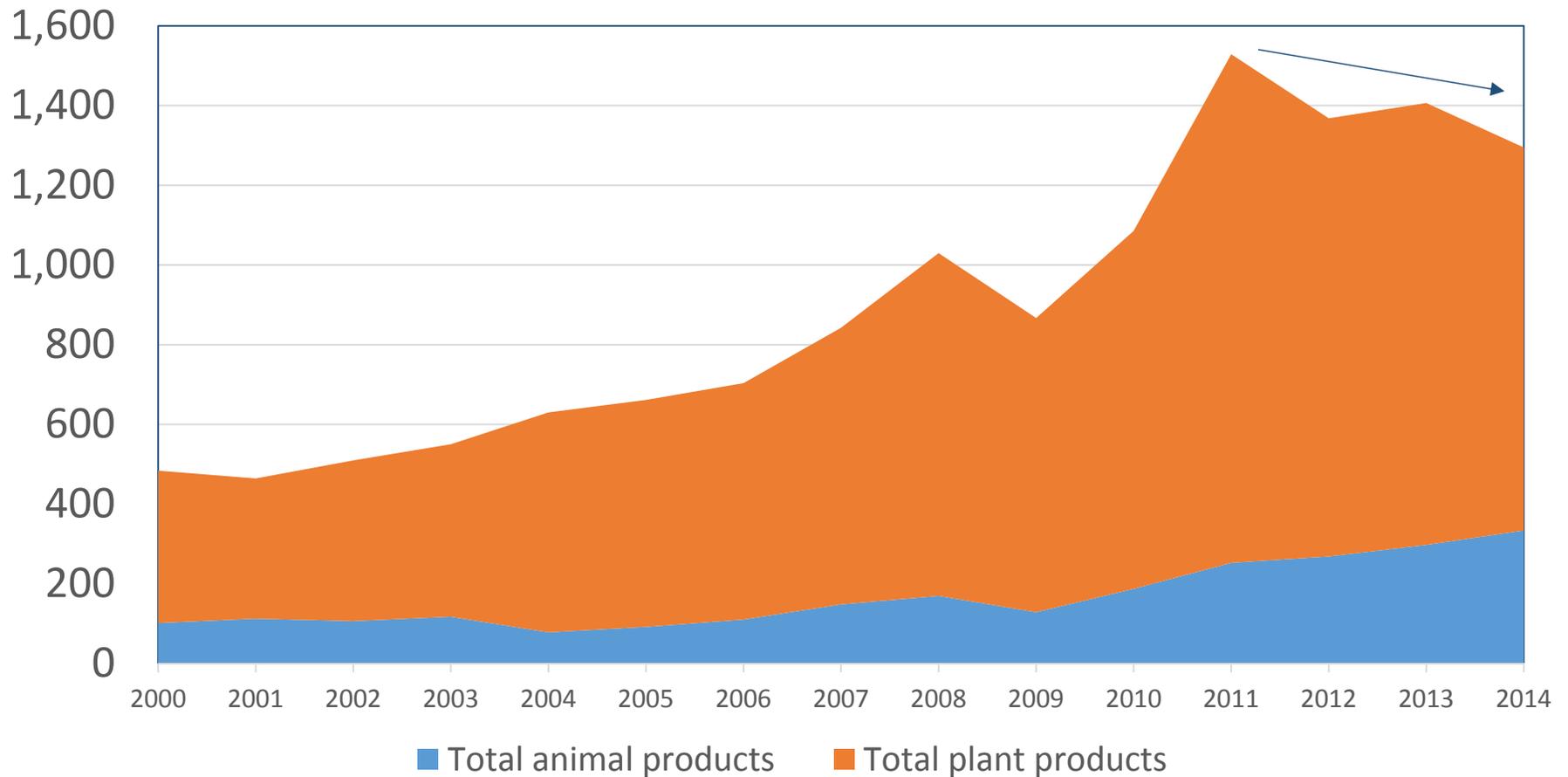
AZ Ag Exports Nearly \$1.3 Billion in 2014

Arizona Agricultural Exports in \$ Millions

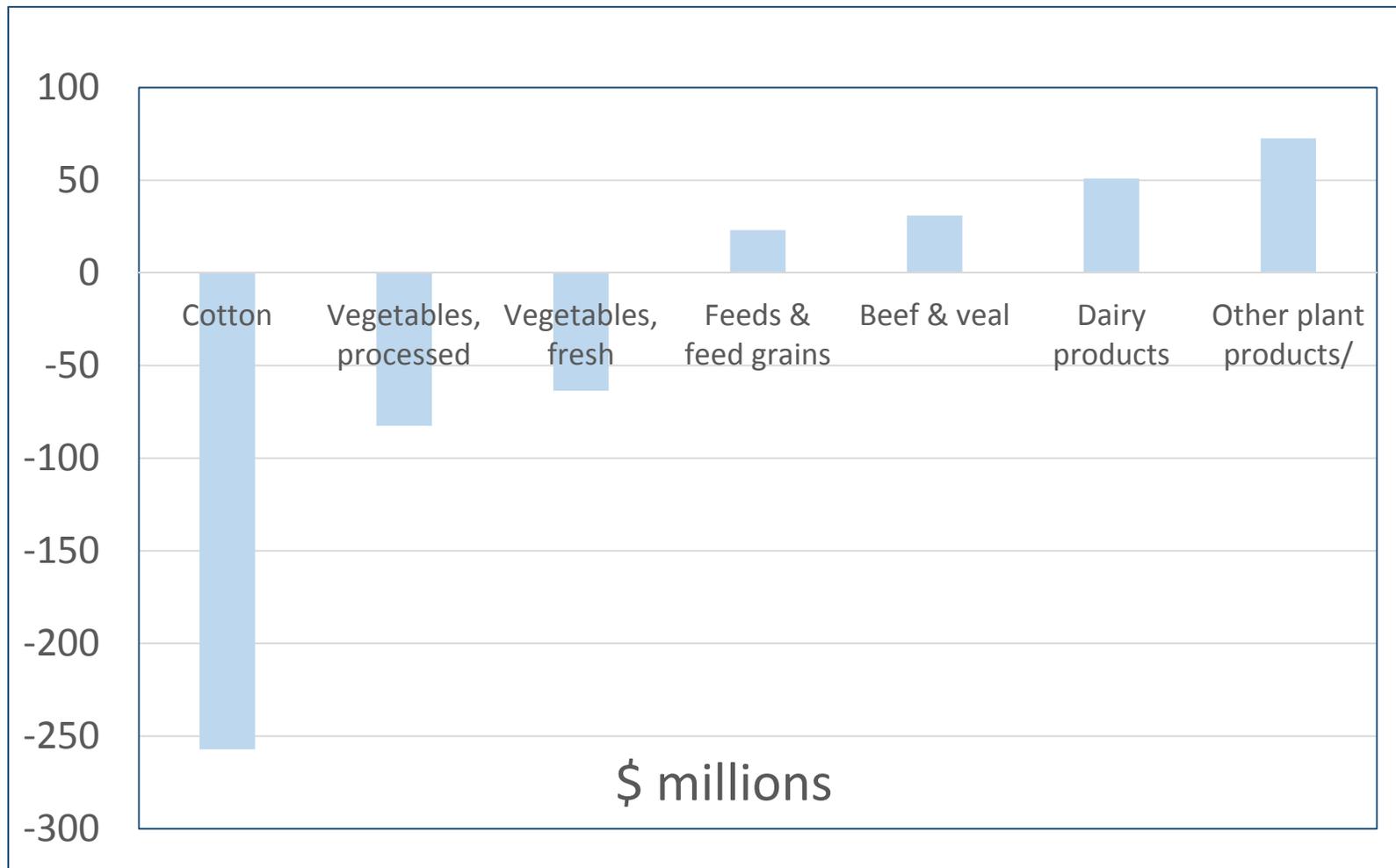


Why the Reduction?

Arizona Agricultural Exports in \$ Millions



Change in Exports 2011 to 2014



Trans-Pacific Partnership (TPP) Agreement

- Includes US and 11 other Pacific Rim Countries
- Japan a large potential market
- Vietnam has 90 million people, but with low incomes (potential for development)
- Reduces tariffs on certain commodities important to Arizona

Average Percentage Tariffs

	Japan	Vietnam
Dairy Products	24.1	12.1
Tree Nuts	5.6	23
Melons	4.7	30

Additional Reports

The Contribution of the Beef Industry to the Arizona Economy

<http://ag.arizona.edu/arec/pubs/beefindustryeconcontrib.html>

Agriculture in Arizona's Economy: An Economic Contribution Analysis

<http://ag.arizona.edu/arec/pubs/aginazeconomy.html>

Fresh Produce & Production-Sharing:

Bi-National Business Linkages Associated with Foundations and Opportunities for Nogales and Santa Cruz County

[http://ebr.eller.arizona.edu/research/fresh produce and production sharing Nogales Santa Cruz County Arizona 9 25 13.pdf](http://ebr.eller.arizona.edu/research/fresh_produce_and_production_sharing_Nogales_Santa_Cruz_County_Arizona_9_25_13.pdf)

Questions?

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COOPERATIVE EXTENSION