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Contribution of Agribusiness to the Magic Valley Economy, 2018

Ashlee Westerhold

Former Area Extension Economist,
University of Idaho Extension

Steven Hines

Jerome County Extension Educator,
University of Idaho Extension

Joel Packham

Former Cassia County Extension Educator,
University of Idaho Extension

Garth Taylor

Associate Professor of Agricultural
Economics, University of Idaho Extension

Contents

- 1 Executive Summary
- 1 Highlights
- 2 Agribusiness in the Magic Valley
- 2 Gross and Base: Two Ways to Measure Economic Contribution
- 4 Gross and Base Contributions to the Magic Valley Economy
- 4 Output (Sales) Contribution of Agribusiness
- 7 The VA (GRP) Contribution of Agribusiness
- 8 Employment Contribution of Agribusiness
- 10 Multipliers and Impacts
- 10 Output Multipliers
- 10 Multipliers of VA
- 11 Jobs Multipliers
- 12 Further Reading

Executive Summary

AGRICULTURE IN THE MAGIC VALLEY (Cassia, Lincoln, Minidoka, Gooding, Jerome, and Twin Falls Counties) has grown from family farmsteads into a giant agribusiness industry, providing wealth for the region, jobs for residents, and food for national and international markets. Agriculture is the major **base** economic sector in the region, meaning that the agricultural goods produced, processed, and manufactured here are sold and exported outside the region, bringing in new money to encourage new job, services, and business creation as evidenced by the rapid growth of the region. The Magic Valley is the regional hub for goods and services in a 100-mile radius. New money generated by agribusiness exports ripple throughout the Magic Valley economy, creating indirect economic activity for other regional businesses. Using an economic **base** analysis, which measures these ripple (multiplier) effects, agribusiness contributes close to \$12 billion (59%) of total sales, close to \$3.6 billion (48%) of the gross regional product (GRP), and 42,600 jobs (42%) of the jobs in the Magic Valley (all figures based on the 2017 Census of Agriculture).

Highlights

- Agricultural processing or manufacturing (cheese, fish fillets, fries, sugar, etc.) constitutes over half of the agribusiness industry total output.
- Forty-two percent of the total 102,000 jobs in the Magic Valley are directly or indirectly created by agribusiness.
- Agribusiness generates directly or indirectly 48% of the Magic Valley GRP figured on the base measure.
- Magic Valley farm gate receipts comprise \$3.6 billion or 45% of the Idaho total farm gate receipts.

- Magic Valley milk production alone comprise 21% of Idaho total farm gate receipts.
- Idaho ranks fourth in the nation in dairy cow numbers and the Magic Valley is home to 72% of those cows.
- Virtually all (98.7%) of the Magic Valley's 1,071,847 acres of harvested cropland are irrigated.
- The Magic Valley produces over half (61%) of Idaho's sugar beets.
- The Magic Valley produces about 75% of the food-sized trout consumed in the United States.

Agribusiness in the Magic Valley

Agribusiness is a vertically integrated industrial complex engaged in the production and processing of food. The production and marketing channels of the agribusiness industry extend from farm suppliers, to farmers and ranchers, to food processors and food retailers, ending with domestic consumers or international markets. The farm is the intermediate link in the Magic Valley agribusiness complex, with backward linkages to farm suppliers and service providers (fertilizer and seed suppliers, farm equipment dealerships, accountants, etc.), and forward linkages to food processors (fries, cheese, sugar, etc.). In turn, food retailers and even restaurants are linked to processors, but are excluded from the measure of agribusiness's contribution to the Magic Valley economy and are instead included in retail trade.

Gross and Base: Two Ways to Measure Economic Contribution

The contribution of agribusiness or any other sector to the Magic Valley economy can be measured two ways: (1) the **gross** measure, which simply counts the economic activity (sales or output, number of jobs, and value added (VA) [a measure of GRP]) of an industry, and (2) the **base** measure, which credits to an exporting industry the amount of sales, number of jobs, or VA of its backward-linkages to area businesses. Measuring the **gross** economic activity

for a region is a straightforward accounting task: tallying the number of people employed, the total sales, or the total valued added of each industry. Magic Valley employment figures and farm sales are regularly published measures of the region's **gross** economic activity. To be clear, the use of the term export in this situation simply means selling a product or service outside the Magic Valley. For example, if a truckload of alfalfa is sold to a dairy in the Treasure Valley, that alfalfa is exported out of the Magic Valley. If an attorney in Twin Falls, Idaho, has a client from Wells, Nevada, that service is exported out of the Magic Valley, even if that client comes to Twin Falls because they are paying with dollars generated from outside the Magic Valley. Similarly, a tourist coming into the region is bringing new dollars into the Magic Valley.

Both the gross and base measures of economic activity tally every dollar of sales, every job, and every dollar of VA in the Magic Valley economy. While the gross and base measures of the Magic Valley's total economic activity are equal, they differ in which sectors they assign output and jobs in the region. Businesses in the Magic Valley economy can be divided two ways: 1) industries that primarily sell to other local industries and consumers (**nonbase industries**) and 2) industries that sell to customers outside the Magic Valley (export) and therefore bring new dollars into the region (**base industries**). The output of any base industry is the sum of its exports plus sales of the nonbase businesses that support the base industry. Base and nonbase businesses are both essential to a thriving economy. In summary, the base measure is driven by exports and could be more accurately labeled as the contribution of exports. The base measure implies the source of economic growth is exports; thus, the base analysis is useful for developing policies that increase sales, jobs, and income through exports. Base measures are calculated following Waters et. al.'s (1999) social accounting matrix using 2018 IMPLAN data.

The example of a local tire store selling a tire to a local cheese plant clarifies the difference between gross and base measures of economic activity. In this instance, the gross measure attributes the tire sale (and the associated job and VA) to the **nonbase** tire store. The base measure, however, credits the tire

sale to the dairy manufacturing industry because the sale was possible only because the **base** industry cheese plant brought new dollars through cheese exports into the Magic Valley economy. Because the cheese plant provides most of its products to export markets, it is considered a **base** industry.

Wealth in a regional economy is created through exports of products or services produced by businesses in that region. The often-repeated fallacy is that a dollar changes hands seven times before leaving the region. That may be true, but that dollar does not create wealth in the local economy. Unless new money is attracted to an economy, stays, and uses the multiplier effects to create those exports, an economy stagnates. For example, the economic engine that creates exports withers in a small community that a railroad or interstate highway bypasses or where a mine or a sawmill closes. In either case, the outside money from the export of natural resources comes to a halt and the community either finds a new base economy, stagnates, or withers.

Magic Valley businesses create sales, gross domestic product, and jobs because exports or outside money are coming into the region and staying in the region. That money gives capital for investment and job creation. More jobs mean more people and more people need more businesses to support them: grocery stores, restaurants, car dealerships, accountants, etc. Similarly, those businesses also need other businesses to support them: for example, an IT business to help build web pages and keep the internet connected.

The vibrant economy of the Magic Valley region is driven by the exports from agribusiness, which includes on-farm production, ag processing, and the ag services that directly support agriculture. When looking at the economy on the base measure (the sectors that bring new money in), agribusiness creates directly or indirectly 59% of total Magic Valley sales.

Dairy product manufacturing is the largest economic driver of the region (Figure 1). This sector includes every business that takes raw milk from the dairy and processes it into some other product (cheese, yogurt, whey, protein components, etc.). It would be

easy to drive through the region and incorrectly assume that dairies are the largest economic driver due to the sheer number of dairy cows. However, from the base perspective (new dollars coming in from outside the region) the large number of dairy cows have no reason to be here without the presence of dairy manufacturing plants. Dairy manufacturing has a total base output of \$5.27 billion whereas dairy farm production has a total base output of \$745 million. These figures show that very little of the dairy farm sector's \$1.73 billion in gross output is sold outside the region. The milk goes to the local dairy manufacturers and then their processed milk products get sold outside the region. Dairy farm production is backward-linked to dairy manufacturing. Further backward linkages to dairy manufacturing are produced within the Magic Valley, namely feed, labor, and other services. The output multiplier for dairy manufacturing is 2.93. For every dollar of cheese sold (direct sales) outside the region, it generates \$1.93 of indirect sales (the multiplier effect) within the region. A multiplier of almost 3 indicates a strong economic engine for the region because most of the raw materials to make dairy products are produced here in the Magic Valley.

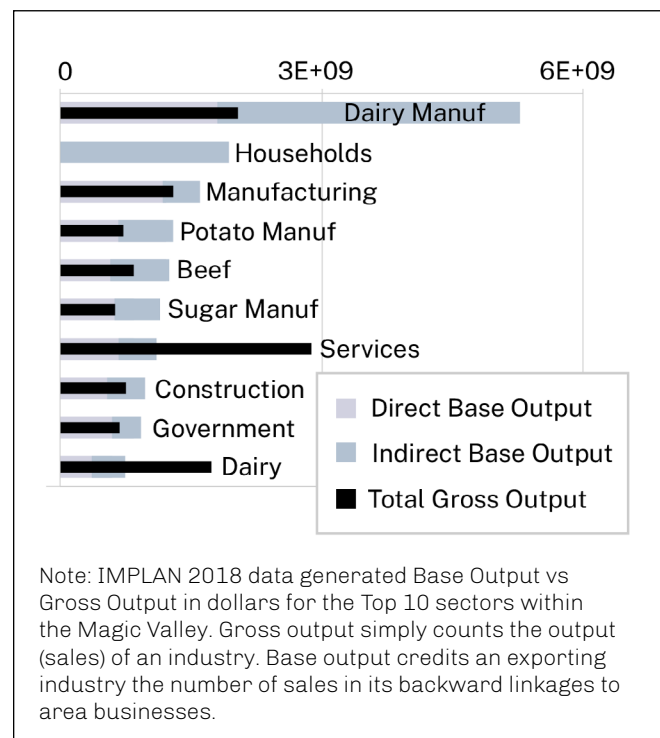


Figure 1. Base versus gross output (top 10) in \$1,000.

In contrast to the dairy-processing industry, the manufacturing (nonagricultural) sector has a multiplier of 1.37: for every \$1 of sales (the direct effect) outside the region, \$.37 (the indirect effect) is generated in other Magic Valley businesses. Consider a local trailer manufacturing plant. The inputs for trailer manufacturing (steel, aluminum, insulation, wood, wire) must be imported. For whatever reason (cheaper labor, favorable business climate, or closer proximity to their markets), the trailer company can profitably produce trailers in the Magic Valley rather than a location closer to the raw materials.

Understanding these data can help state and local planning organizations understand what industries might fit best in the region. If a business can take a locally produced product, change it to fit market needs, and export that product out of the region, it will strengthen the linkages or multipliers. For example, a malting plant could add value to malt barley; outside sales from a brewery could provide additional value to the malted barley; and a chocolate factory could add value to both local sugar and excess milk.

The data below take a deeper look at how agribusiness impacts the regional economy of the Magic Valley. The contribution of a sector is the product of the multiplier times the number of exports. This is not to imply that other businesses are unimportant. The nonbase industries create the multiplier and the base industries create the exports. Thus, both nonbase and base businesses are critical to a thriving economy. Business supports other business. For any economy to thrive and grow, it is critically important to bring new money in and invest it throughout the regional economy.

Gross and Base Contributions to the Magic Valley Economy

This study measures the contribution of agribusiness and other sectors to the Magic Valley economy in terms of output, VA (GRP), and number of jobs. In 2018, the total output of the Magic Valley economy was close to \$20 billion, GRP was \$7.4 billion, and business in the region employed just under 102,000 people (Table 1). The households and government sectors have no direct contribution to sales,

employment, or VA; however, they are responsible for bringing new money into the region that is used to create economic activity in other sectors. The households sector receives income from exported labor, Social Security, dividends, pensions, etc., and do not require the purchase of inputs (fertilizer, seed, labor, etc.) to produce. However, this income ripples throughout the local economy generating sales, jobs, and VA. Similarly, the government sector receives money from the federal government and taxes that do not require the purchase of inputs. Again, payments to government sector ripple throughout the economy to indirectly generate sales, jobs, and GRP. Federal and state employees who receive their paycheck from sources outside the region are included in the government sector and are discussed in the Value-Added section (Table 1).

Output (Sales) Contribution of Agribusiness

Idaho's 2018 farm cash receipts were more than \$7.5 billion and sales from Magic Valley farms accounted for almost half (\$3.8 billion) of the state's total (United States Department of Agriculture [USDA]-National Agricultural Statistics Service [NASS] 2017). Idaho has some agricultural "superstars," ranking first nationally in potato, barley, and alfalfa hay production and second in sugar beet production. Nationally, Idaho ranks third in milk production and fourth in the number of dairy cows (the Magic Valley is home to 72% of those cows). The Magic Valley produces 61% of Idaho's sugar beets. The region also produces nearly three-fourths of the food-sized trout consumed in the United States, making Idaho number one in the nation. What gives Magic Valley agriculture its huge contribution to the economy is not just sheer size, but also the magnitude of its forward linkages to the processing sectors. The Magic Valley's principle processed agricultural products—potatoes, sugar beets, and milk—create additional economic benefits in the manufacturing industries. When the **gross output** of agricultural manufacturing is added to the value of agricultural production, the total gross output of agribusiness in the Magic Valley in 2018 was just over \$8.6 billion (Table 2).

Table 1. Output, jobs, and VA in the Magic Valley economy, 2018. FIRE = Fire, Insurance, Real Estate.

Sector	Output (\$ millions)				Jobs				Value Added or GRP (\$ millions)			
	Gross Total	Base Total	Direct Base	Indirect Base	Gross Total	Base Total	Direct Base	Indirect Base	Gross Total	Base Total	Direct Base	Indirect Base
Services	2,874	1,103	666	437	33,811	11,091	7,828	3,263	1,542	576	357	218
FIRE	2,077	196	124	72	7,662	936	457	479	1,024	97	61	36
Dairy Manuf	2,035	5,269	1,797	3,472	1,590	17,781	1,404	16,377	211	1,301	186	1,115
Dairy	1,729	746	356	390	6,539	3,407	1,345	2,062	287	227	59	168
Trade	1,713	612	363	249	12,883	4,485	2,729	1,755	913	317	193	123
Manufacturing	1,293	1,600	1,168	433	2,946	5,683	2,661	3,022	283	461	256	205
Beef	841	1,244	570	674	983	4,365	667	3,698	317	527	215	313
Trans and Storage	759	296	176	120	5,015	2,027	1,165	862	376	147	87	60
Construction	754	973	637	336	5,700	7,251	4,817	2,434	353	465	298	167
Potato Manuf	718	1,288	662	627	1,816	5,136	1,673	3,463	150	418	138	280
Government	674	925	593	331	10,455	11,684	9,196	2,488	641	730	564	167
Sugar Manuf	627	1,139	621	518	1,142	4,776	1,131	3,646	114	385	113	272
Livestock Feed Manuf	575	226	139	87	467	575	113	463	94	63	23	41
Utilities	402	163	96	67	523	443	125	318	169	72	40	31
Hay and Silage	347	130	72	58	1,758	829	366	462	162	64	34	31
Potatoes	333	147	83	65	948	737	235	502	135	67	34	34
Beef Proc	326	647	296	351	360	1,980	327	1,653	36	200	33	167
Information	311	105	65	40	912	472	191	281	100	40	21	19
Grains	253	131	69	62	358	563	97	466	132	68	36	32
Ag Services	194	33	21	12	3,269	449	357	92	147	22	16	6
Sugar Beet	175	7	4	3	1,188	51	28	23	101	4	2	2
Fish Proc	125	216	115	102	122	536	112	424	22	73	20	53
Other Food Manuf	119	178	112	67	297	718	279	439	55	83	51	32
Grains Manuf	115	124	76	47	40	282	27	255	10	31	7	24
Mining	77	88	55	33	453	561	322	238	7	21	5	16
Misc Animal	72	40	24	16	400	246	134	112	59	28	20	8
Fish	62	16	12	4	69	45	13	31	36	9	7	2
Ethanol	12	13	11	2	13	30	12	18	1	2	1	1
Misc Crops	10	14	8	6	77	108	63	45	5	7	4	3
Households		1,934		1,934		14,550		14,550		974		974
Total	19,604	19,604	8,989	10,615	101,796	101,796	37,874	63,923	7,479	7,479	2,880	4,599

Note: IMPLAN 2018 data shows the output (sales) in millions, jobs, and value added in millions of all the sectors within the Magic Valley. Gross economic activity for a region tallying the number of people employed, the total sales, or the total valued added of each industry. The base measure is driven by exports and could be more accurately labeled as the contribution of exports.

Table 2. Base output of the Magic Valley agribusiness sectors, 2018.

Sector	Output (\$ millions)				
	Base Total	Direct Base	Indirect Base	Gross Total	Sector Total % of Base
Dairy Manuf	5,269	1,797	3,472	2,035	45.4%
Potato Manuf	1,288	662	627	718	11.1%
Beef	1,244	570	674	841	10.7%
Sugar Manuf	1,139	621	518	627	9.8%
Dairy	746	356	390	1,729	6.4%
Beef Proc	647	296	351	326	5.6%
Livestock Feed Manuf	226	139	87	575	1.9%
Fish Proc	216	115	102	125	1.9%
Other Food Manuf	178	112	67	119	1.5%
Potatoes	147	83	65	333	1.3%
Grains	131	69	62	253	1.1%
Hay and Silage	130	72	58	347	1.1%
Grains Manuf	124	76	47	115	1.1%
Misc Animal	40	24	16	72	0.3%
Ag Services	33	21	12	194	0.3%
Fish	16	12	4	62	0.1%
Misc Crops	14	8	6	10	0.1%
Ethanol	13	11	2	12	0.1%
Sugar Beet	7	4	3	175	0.1%
Total	11,610	5,047	6,563	8,668	

Note: IMPLAN 2018 data shows the base output (sales) in millions of all the agribusiness sectors within the Magic Valley. Gross economic activity for a region tallies the number of total sales. The base measure is driven by exports and could be more accurately labeled as the contribution of exports. Sector Total % of Base is the Base Total for the individual sector divided by the Total Base Total of all the agribusiness sectors.

The **base** contribution of agribusiness to output is \$11.6 billion, 59% of the total output of the Magic Valley's economy. Of that total **base output**, \$5 billion is direct sales from agribusiness to export markets and \$6.6 billion is from indirect sales that are the hidden sales of the agribusiness industry through its backward linkages such as tractor dealers, tax accountants, etc. Dairy manufacturing is the Magic Valley's largest base industry, contributing just under \$5.3 billion (27%) in base sales to the Magic Valley economy (Table 1). Dairy manufacturing has \$1.8 billion of sales directly from the plants plus \$3.5 billion of sales indirectly generated in other businesses in the Magic Valley. The second-largest agricultural base industry is potato manufacturing. This industry contributes 11% of the total base sales to the Magic Valley economy—\$662 million of direct sales and \$627 million of indirect sales. The third-largest agricultural base industry is beef production, contributing 11% of the total base sales to the Magic Valley economy.

While not in the agribusiness sector, the households sector, the new money that households receive in the form of wages earned outside the region, transfer payments (social security, unemployment), dividends, and retirement payments, etc., is the second-ranked base sector in the Magic Valley economy. Households make an indirect contribution of 9.8% of base sales to the Magic Valley economy. The trade (retail, parts stores, etc.) and the service sector (repair shops, professional services, etc.) are largely nonbase businesses that support the base or exporting businesses such as dairy and potato manufacturing. Thus, the gross sales of the services sector, \$2.9 billion, exceed the services sector's base sales of \$1.1 billion, indicating the service sector is a nonbase industry. The service sector exports business because the Magic Valley is a regional hub. People from outside the region come here to access services such as a lawyer, accountant, or farm equipment mechanic.

Comparisons within the agribusiness sector of the Magic Valley economy (Figure 2) show that dairy manufacturing, potato manufacturing, and beef production comprise over half of the agribusiness industry base output. The top four base output agribusinesses are dairy processing with 45%, followed by potato manufacturing 11%, beef production with 11%, and sugar manufacturing at 10%. Dairy production at 6% is the only other production sector in the top ten base output agribusiness industries.

The VA (GRP) Contribution of Agribusiness

The GRP or VA (value added) is the broadest measure of prosperity in an economy and is the money left after paying all the input costs of production except for labor, land (rent), interest costs, taxes, and profit. The VA is an indicator of business productivity. It shows how productive each industry sector is at increasing the value of its inputs. For example, sugar manufacturing increases the value of sugar beets to a more profitable product, thus generating greater returns to invest in more labor, land, interest, taxes, and profit within the region.

The six counties of the Magic Valley account for \$7.5 billion (9.5%) of Idaho’s \$79 billion **gross** state product. Being an export base industry, however, agribusiness is the Magic Valley’s top ranked VA industry. The **base** contribution of agribusiness to the region’s GRP was \$3.6 billion in 2018 (Table 3), 48% of the total base VA. Of agribusiness’s contribution to GRP, \$1 billion is generated by exports (direct base) and \$2.6 billion is generated by the nonbase businesses that support the base agribusiness industry.

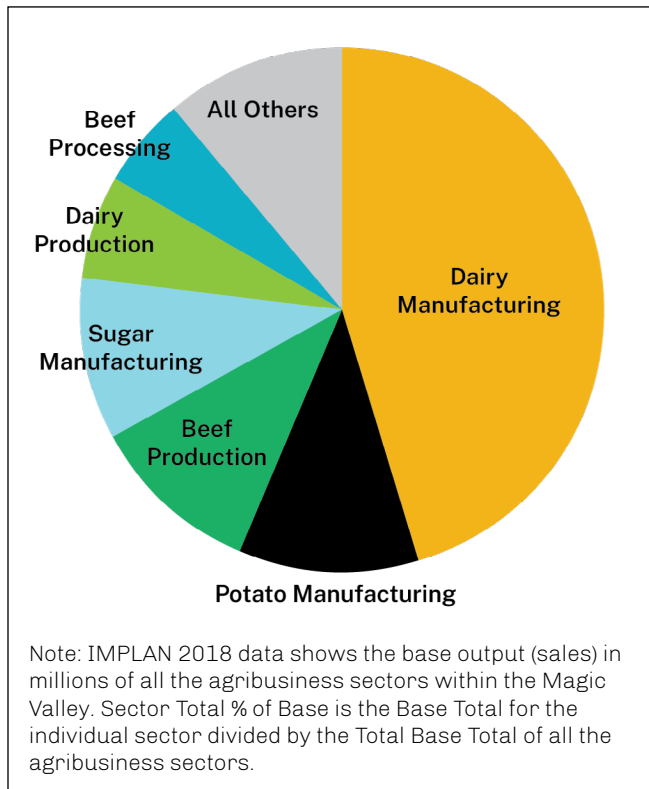


Figure 2. Base output of Magic Valley agribusiness by sector, 2018.

Table 3. The VA in the Magic Valley agribusiness sectors, 2018.

Sector	Value Added or GRP (\$ millions)				
	Base Total	Direct Base	Indirect Base	Gross Total	Sector Total % of Base
Dairy Manuf	1,301	186	1,115	211	36.3%
Beef	527	215	313	317	14.7%
Potato Manuf	418	138	280	150	11.7%
Sugar Manuf	385	113	272	114	10.7%
Dairy	227	59	168	287	6.4%
Beef Proc	200	33	167	36	5.6%
Other Food Manuf	83	51	32	55	2.3%
Fish Proc	73	20	53	22	2.0%
Grains	68	36	32	132	1.9%
Potatoes	67	34	34	135	1.9%
Hay and Silage	64	34	31	162	1.8%
Livestock Feed Manuf	63	23	41	94	1.8%
Grains Manuf	31	7	24	10	0.9%
Misc Animal	28	20	8	59	0.8%
Ag Services	22	16	6	147	0.6%
Fish	9	7	2	36	0.3%
Misc Crops	7	4	3	5	0.2%
Sugar Beet	4	2	2	101	0.1%
Ethanol	2	1	1	1	0.1%
Total	3,580	997	2,583	2,072	

Note: IMPLAN 2018 data shows the Value Added (VA) or Gross Regional Product (GRP) in millions of all the agribusiness sectors within the Magic Valley. The GRP or VA is the money left after paying all the input costs of production except for labor, land (rent), interest costs, taxes, and profit. The VA shows how productive each industry sector is at increasing the value of its inputs. Sector Total % of Base is the Base Total for the individual sector divided by the Total Base Total of all the agribusiness sectors.

Dairy manufacturing is the largest base VA industry, contributing 17.4% (\$1.3 billion) of base VA to the Magic Valley economy (Table 1). In other words, \$1 in every \$5.70 of VA in the Magic Valley is contributed by dairy manufacturing. Dairy manufacturing base VA contribution is the sum of \$186 million of VA directly generated by the processing plants plus \$1.1 billion of VA indirectly generated in other businesses in the Magic Valley.

Comparisons within the agribusiness sector of the Magic Valley economy (Figure 3) shows that the dairy industry alone combining manufacturing and production make up 42% of the VA money. Dairy, potato, and sugar manufacturing industries comprise 59% of the agribusiness industry base VA. The top three base VA agribusinesses are dairy manufacturing with 36%, followed by beef production with 15% and third, potato manufacturing with 12%. Dairy production represents the only other production agriculture industry in the top six base VA agribusiness industries.

Employment Contribution of Agribusiness

Employment (jobs) can be ranked using either **gross** or **base** measures. The total jobs in the region are the same for both, but each considers the job in a different sector. For example, in the sector labeled Trade (grocery stores, car dealerships, tire shops, etc.), **gross** employment is 12,883 jobs (Table 1) while **base** employment is 4,485 jobs. The **gross** measure assigns all 12,833 jobs to the trade sector, but the **base** measure assigns only 4,485 jobs to the trade sector and links the creation of the remaining 8,398 jobs to other sectors in the region to exported sales of those other sectors. Referring to the tire sales example at the beginning of the bulletin, the tire-shop job links back to the dairy manufacturing plant by the **base** measure. In other words, by the **base** measure, the tire shop had another job available only after the dairy manufacturing plant grew the economy enough to support that job. Consider how the economy of a small town booms when a major new manufacturing employer comes to the area. New people move in to fill the jobs, which stimulates other business development in support. The additional jobs emerge only because the new manufacturing business brings new money into the area.

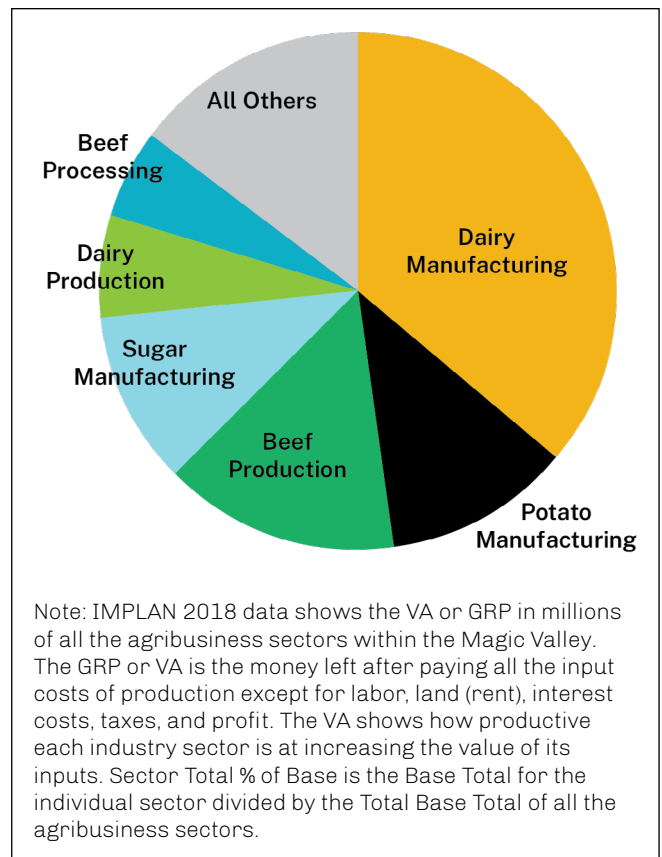


Figure 3. Base VA in Magic Valley agribusiness by sector, 2018.

Ranking contribution by jobs results in different rankings than by sales. Farming and manufacturing are highly mechanized and relatively efficient industries that require small labor input for high-value output. Agribusiness has become very labor efficient. A decreasing number of producers continue to produce more crops and livestock. Similarly, food manufacturing continues to become more labor efficient. Low employment is reflected in agribusiness's **gross** contribution to Idaho's employment. **Gross jobs** in agribusiness are 21% (21,438 jobs) of the total jobs in the region. Reflecting the large labor requirement on the region's dairies, the dairy production industry bucks the trend as it is the fifth-largest overall employer in the Magic Valley economy, providing over 6,539 jobs. Using the **base** measure, agribusiness employs 42% (42,615) of the total jobs in the Magic Valley that are directly or indirectly created by agribusiness (Table 4). Of those **base jobs**, 8,383 are directly employed in agribusiness firms and 34,232 are indirect jobs from nonbase businesses that support the agribusiness

industry. Roughly one in every 5½ jobs (17%) in the Magic Valley is directly or indirectly created by dairy manufacturing. Over one-quarter (27%) of the base jobs are created by the three major manufacturing sectors: dairy manufacturing (17%), potato manufacturing (5%), and sugar manufacturing (4.5%). Dairy-manufacturing base job contribution is the sum of 1,590 jobs directly generated by the manufacturing plants plus 17,781 jobs indirectly generated by other Magic Valley businesses. The dairy industry, manufacturing and production combined, accounts for 21% of the base jobs in the Magic Valley.

Comparisons within the agribusiness sector of the Magic Valley economy (Figure 4) show that the processing industries of dairy, potato, and sugar comprise almost two-thirds (65%) of the agribusiness industry base employment. The top three agribusinesses providing the greatest number of base jobs are dairy manufacturing with 42%, followed by potato manufacturing with 12%, and sugar manufacturing with 11%. Beef production (10%), dairy production (8%), and beef processing (5%) round out the top six places.

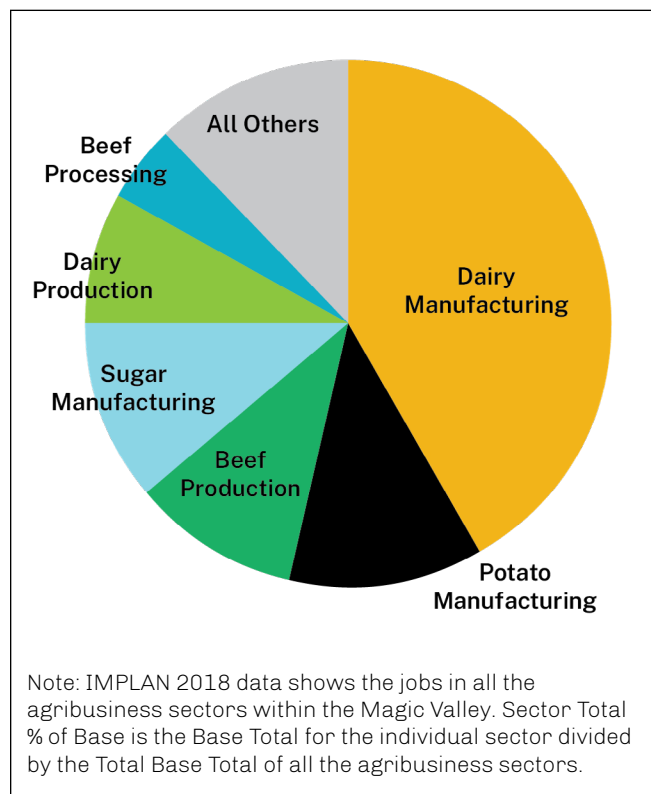


Figure 4. Base jobs in the Magic Valley agribusiness sectors, 2018.

Table 4. Jobs in the Magic Valley agribusiness sectors, 2018.

Sector	Total Number of Jobs				Sector Total % of Base
	Base Total	Direct Base	Indirect Base	Gross Total	
Dairy Manuf	17,781	1,404	16,377	1,590	41.7%
Potato Manuf	5,136	1,673	3,463	1,816	12.1%
Sugar Manuf	4,776	1,131	3,646	1,142	11.2%
Beef	4,365	667	3,698	983	10.2%
Dairy	3,407	1,345	2,062	6,539	8.0%
Beef Proc	1,980	327	1,653	360	4.6%
Hay and Silage	829	366	462	1,758	1.9%
Potatoes	737	235	502	948	1.7%
Other Food Manuf	718	279	439	297	1.7%
Livestock Feed Manuf	575	113	463	467	1.3%
Grains	563	97	466	358	1.3%
Fish Proc	536	112	424	122	1.3%
Ag Services	449	357	92	3,269	1.1%
Grains Manuf	282	27	255	40	0.7%
Misc Animal	246	134	112	400	0.6%
Misc Crops	108	63	45	77	0.3%
Sugar Beet	51	28	23	1,188	0.1%
Fish	45	13	31	69	0.1%
Ethanol	30	12	18	13	0.1%
Total	42,615	8,383	34,232	21,438	

Note: IMPLAN 2018 data shows the jobs in all the agribusiness sectors within the Magic Valley. Sector Total % of Base is the Base Total for the individual sector divided by the Total Base Total of all the agribusiness sectors.

Multipliers and Impacts

Exports are the “new money” that drive regional economic activity. To produce exports, a business must buy goods and services from local businesses and/or import goods and services from outside the region. Thus, new money from the exports of one business circulates among other local businesses, creating a multiplier or “ripple effect” in the local economy. A larger multiplier means that the business directly and indirectly purchases a larger proportion of its inputs from within the local economy instead of importing from outside the region. Conversely, lower multipliers indicate the exporting business must purchase a greater proportion of its inputs from outside the regional economy, causing money to “leak” from the local economy into an economy outside the region. There are three multipliers: output (sales), jobs, and VA (Table 5). The output, jobs, or VA impact of a business is the multiplier times the exports of that business; however, jobs is a multiplier of \$1 million of exports whereas output and VA are per \$1 of exports. Similarly, the impact of a new business, business expansion, or business closure is the product of the multiplier for that respective business times the change in exports.

Output Multipliers

Dairy manufacturing, beef processing, and beef production have the highest output multipliers of 2.93, 2.19, and 2.18, respectively. These businesses rely heavily on locally produced raw products of milk, slaughter animals, and beef calves. For example, for every \$1.00 of cheese exports there are \$2.93 of sales directly and indirectly generated in the Magic Valley economy. The sale includes the \$1.00 of cheese directly sold plus \$1.93 in indirect economic activity generated by that sale.

Multipliers of VA

The VA is an indicator of business productivity: it shows how productive each industry sector is at increasing the value of its inputs. The figure quantifies the return to wages and salaries, proprietor’s income (profit), indirect business taxes (i.e., gasoline tax), dividends, interest, and rents. These are the returns of a profitable business to the regional economy. The three industries of the Magic

Table 5. Export multipliers for output, job, and VA.

Sector	Output	Jobs	Value-Added
Services	1.66	16.67	0.86
FIRE	1.58	7.56	0.78
Dairy Manuf	2.93	9.89	0.72
Dairy	2.10	9.58	0.64
Trade	1.68	12.35	0.87
Manufacturing	1.37	4.87	0.39
Beef	2.18	7.66	0.93
Trans and Storage	1.68	11.49	0.83
Construction	1.53	11.38	0.73
Potato Manuf	1.95	7.76	0.63
Government	1.56	19.70	1.23
Sugar Manuf	1.83	7.70	0.62
Livestock Feed Manuf	1.63	4.15	0.46
Utilities	1.70	4.61	0.75
Hay and Silage	1.80	11.48	0.89
Potatoes	1.78	8.93	0.82
Beef Proc	2.19	6.69	0.67
Information	1.62	7.25	0.61
Grains	1.90	8.19	0.99
Ag Services	1.58	21.23	1.05
Sugar Beet	1.71	12.39	0.94
Fish Proc	1.89	4.68	0.64
Other Food Manuf	1.60	6.43	0.74
Grains Manuf	1.62	3.68	0.40
Mining	1.60	10.23	0.38
Misc Animal	1.67	10.15	1.14
Fish	1.37	3.71	0.77
Ethanol	1.22	2.75	0.18
Misc Crops	1.70	13.00	0.84
Households	0.00	0.00	0.36

Note: IMPLAN 2018 data shows the export multipliers of output (sales) in millions, jobs, and VA in millions of all the sectors within the Magic Valley. **Output (sales) multiplier:** the sum of the direct and indirect output required from all sectors of the local economy to sustain one additional dollar of sales to exports from a given industry. **Jobs multiplier:** the sum of the direct and indirect jobs required from all sectors of the local economy needed to sustain one additional million dollars of sales to exports from a given industry. **VA multiplier:** the sum of the direct and indirect income required from all sectors of the local economy needed to sustain one additional dollar of sales to exports from a given industry. FIRE = Fire, Insurance, Real Estate.

Valley economy that have the highest VA multipliers are government, miscellaneous animal production, and ag services with multipliers of 1.23, 1.14, and 1.05, respectively. As with output and jobs multipliers, VA multipliers are driven by exports—the new money in an economy.

The VA multiplier is defined as the direct and indirect VA created in the Magic Valley economy per dollar of exports from any given industry. For every additional \$1 of government wages earned in the Magic Valley, there is \$1.23 of VA generated ($\1×1.23). For example, a USDA Farm Service Agency loan officer working in the Magic Valley is paid by the federal government. Essentially, the employee is exporting their labor to the federal government, thus bringing new money into the region.

Economic sectors with high labor expenses have high VA multipliers because return to wages and salaries is a part of the VA formula and that labor is made up of Magic Valley residents. The money employees spend in the region is captured in the output multiplier and is not considered in the VA multiplier. One reason that miscellaneous animal production has a high VA multiplier is explained by the fact that hens used to produce eggs for live chick production are raised on rented property and well over 99% of those chicks are sold outside the area. The structure for paying labor in the chick sector is also higher than many other ag sectors. These returns to labor and land rent are included in the equation of VA. Thousands of acres of farmland are rented in the Magic Valley. These rents contribute to VA.

Jobs Multipliers

The service sectors, ag services, government, and other service industries, have the highest jobs multipliers of 21.23, 19.70, and 16.67, respectively. These labor-intensive industries purchase their principal input (labor) from Magic Valley residents. Thus, for every million dollars of exports from ag services (sales to consumers from outside the Magic Valley), 21.23 jobs are directly and indirectly created in the Magic Valley. Ag services exports are not necessarily large, but the multiplier shows the high labor requirement for the service sectors to produce \$1 million of exports. Stated another way, a large jobs multiplier does not necessarily indicate a sector

brings large sums of new money into an economy. Manufacturing sectors are highly mechanized and relatively efficient industries that require small labor input for high value output. For example, dairy manufacturing has a small jobs multiplier of 9.89, indicating that it takes very little labor to produce \$1 million of exports. Even though the jobs multiplier is small, the dairy manufacturing output multiplier is far greater than the ag services sector output multiplier, demonstrating that the dairy manufacturing sector creates far more jobs in the Magic Valley even though the jobs multiplier is smaller.

The Magic Valley is a growing economy due to outside money coming into and staying in the region. That money gives capital for investment and job creation. The economy of the Magic Valley region is sustained by agribusiness, which includes on-farm production, ag processing, and the ag services that directly support agriculture. Agribusiness contributed 59% of the total regional base output, which is the new money flowing into the regional economy. It takes all kinds of businesses and services to support a healthy regional economy, but growth is driven by the base industries. In the Magic Valley, agribusiness is the primary base industry that drives the economy.

Definitions

base versus nonbase. Nonbase industries primarily sell to local industries and consumers. Base industries primarily sell to customers outside the region (export), bringing new dollars into the region.

direct effect. The economic activity generated by exports of any industrial sector.

exports. Sales of goods and services to customers outside the Magic Valley, to other Idaho regions, other states, and international markets.

indirect effect. The economic activity generated by industries purchasing inputs from other local businesses to support the sales of exports.

jobs. Full- and part-time employment, including business proprietors.

output or sales. Output is more accurate than sales because some businesses use goods of their own manufacture. For trade businesses, gross sales are defined as the markup (net of the cost of goods).

value added (VA) or gross regional product (GRP). The sum of (1) wages and salaries, (2) proprietor's income, (3) indirect business taxes, and (4) dividends, interest, and rents.

Industry Definitions

Most industry labels are self-explanatory except the following:

ag services. Service industries that directly support agricultural sectors (e.g., equipment dealers, fertilizer salesmen, soil test labs, etc.).

government. The operations of any government service that employs people (e.g., public schools, transportation, Forest Service, Bureau of Land Management).

trade. Wholesale and retail trade businesses.

Multipliers

jobs multiplier. The sum of the direct and indirect jobs required from all sectors of the local economy needed to sustain one additional million dollars of sales to exports from a given industry.

output (sales) multiplier. The sum of the direct and indirect output required from all sectors of the local economy to sustain one additional dollar of sales to exports from a given industry.

value-added multiplier. The sum of the direct and indirect income required from all sectors of the local economy needed to sustain one additional dollar of sales to exports from a given industry.

Further Reading

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