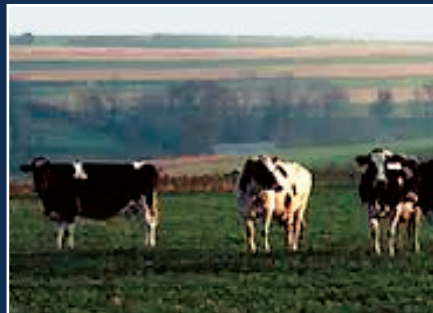
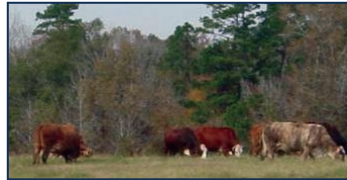


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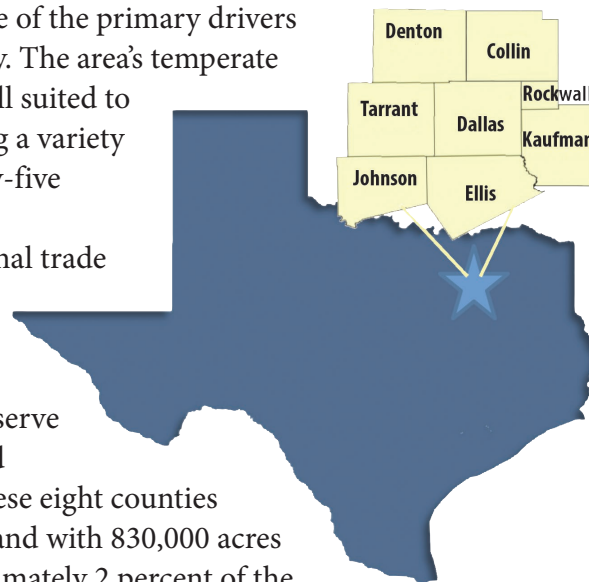
# *The Impact of* **AGRIBUSINESS** *in the Dallas-Fort Worth Metroplex*



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When you mention the Dallas-Fort Worth Metroplex to someone, they are more likely to imagine big city lights and high rises than farms and field crops. However, agriculture is one of the primary drivers of the Dallas-Fort Worth Metroplex economy. The area's temperate weather and available irrigation water are well suited to a variety of agricultural enterprises, including a variety of livestock operations and more than twenty-five commercial crops.

Dallas and Tarrant counties are the regional trade center for the eight-county region whose agricultural importance we will examine. Denton and Collin counties form the northern border while Ellis and Johnson counties serve as the region's southern border. Rockwall and Kaufman counties set the eastern border. These eight counties comprise over 910,000 acres of agricultural land with 830,000 acres in crops and 80,000 acres in pasture. Approximately 2 percent of the cropland is in irrigated production.







## The agricultural industry

Agricultural activity makes a very significant contribution to the Metroplex's economy. From 2009 through 2012, the total of value-added agricultural commodities, government payments to producers, and the payroll of agribusiness firms averaged more than \$11.0 billion per year (Table 1). While impressive, that figure does not reflect the entire value of the agricultural industry in the region. Data limitations prevent the inclusion of public sector employees involved in agriculture.

**Table 1. Annual total agricultural cash receipts, government payments, and agribusiness payroll, Dallas-Fort Worth Metroplex.**

Agribusiness payroll	\$10,285,551,000
Agricultural cash receipts and insurance	\$723,992,380
Government payments to farmers	\$8,711,975
<b>Total</b>	<b>\$11,018,255,355</b>

## The makeup of production agriculture

Production agriculture in this region is as diverse as the communities and landscape within it. While housing, business, and roadway growth has been significant in this region, production agriculture has seen significant growth as well. Between 2007 and 2012, the number of farms and land in farms increased by nearly 10 percent (Table 2). This growth is in contrast to the rest of Texas where the number of farms increased by just over one-half of one percent and farmland

**Table 2. Production agriculture in the DFW Metroplex compared to Texas as a whole (2007 to 2012).**

DFW Metroplex			Texas	
	Actual change 2007 to 2012	Percentage change 2007 to 2012	Actual change 2007 to 2012	Percentage change 2007 to 2012
<b>Number of farms</b>	1,468	9.86	1,372	0.55
<b>Land in farms</b>	206,421	9.75	- 245,315	- 0.19
<b>Avg. size farm (acres)</b>	- 0.14	- 0.10	- 4.00	- 0.76
<b>Number of farms by size:</b>				
1 to 9 acres	170	5.97	- 199	- 0.95
10 to 49 acres	814	12.39	19	0.03
50 to 179 acres	322	9.24	2,604	3.65
180 to 499 acres	127	10.29	- 129	- 0.31
500 to 999 acres	34	9.63	- 534	- 2.99
1,000 acres or more	1	0.26	- 389	- 1.74
<b>Primary occupation of principal operator:</b>				
Farming	763	14.88	6,077	6.16
Other	785	8.05	- 4,705	- 3.16



actually saw a small decrease. Also counter to state trends, farms of every size in the Metroplex also saw increases with most being smaller acreage farms. For the same period, the rest of Texas showed only an increase in farms from 10 to 179 acres with all other size categories showing decreases. These patterns show that production agriculture is alive and healthy in the DFW Metroplex and that it is shifting toward small acreage production.

## The small acreage producer

Small acreage operations in this eight county region are as numerous as they are diverse. Agriculture in the area ranges from wine grape and cherry production to elk and organic beef. The owners of most of these small acreage farms have primary jobs that are off the farm. However, they still produce crops and make a significant economic impact on the area. In fact, some of these small acreage producers have begun to cater to an urban population that wants to experience agriculture first hand.

The proximity of these farms to a large metropolitan population allows many of them to provide “agritainment” (entertainment in an agricultural setting). Wineries offer festivals where attendees can see the wine making process first hand—along with concerts and shopping. In the fall, pumpkin farms are a great place to enjoy cooler weather and shop for Halloween. Other farms may offer hayrides and corn mazes. Cut-your-own Christmas tree farms offer activities such as sleigh rides and ornament making.



**Proximity of farms to large metropolitan areas allows urbanites to enjoy wine-making tours and just-picked produce at local farmers markets.**

*Source: Kent Wang (CC BY-SA 2.0)*

Urban populations and agriculture can also come together in the Metroplex’s more than thirty farmers markets. All these agritainment activities blend traditional production agriculture with the urban setting—they allow city dwellers to understand and experience farming first hand.

## Analysis of production agriculture

Production agriculture’s contribution to the trade area’s economy is multifaceted. Cash receipts for crops, livestock and livestock products in the Dallas-Fort Worth Metroplex averaged \$732.7 million from 2010 to 2013 (Table 3). The direct value of agricultural production, however, is not the only benefit to the local economy. Many production expenses are paid to local suppliers. Farmers and ranchers also spend part of their wages and profits in the county—eating at local restaurants and buying groceries, clothing, and movie tickets. In turn, the employees of these businesses purchase supplies and spend their wages at local businesses. The \$732.7 million economic contribution from farm and ranch production leads to a total region-level economic output of \$1.3 billion. Though some of that agribusiness money is eventually spent in other states or internationally, a considerable portion is still spent in Texas. The area’s farm-level production leads to an output of \$49.4 billion to Texas.

**Table 3. Average annual agricultural cash receipts, Dallas-Fort Worth Metroplex, 2010-2013.**

<b>Commodity or income source</b>	<b>Value (\$1,000)</b>	<b>% of state total</b>	<b>Total economic output (\$1,000)</b>	<b>State economic output (\$1,000)</b>
<b>Crops</b>				
Nursery crops	296,964	19.12	558,836	3,222,715
Other ag. related	69,202	19.78	150,708	770,681
Wheat	49,789	6.66	91,924	1,502,788
Hay and ensilage	43,644	3.68	81,581	2,448,936
Corn	25,785	1.89	47,606	2,741,634
Grain sorghum	25,138	3.37	46,412	1,499,825
Cotton	14,748	0.42	27,718	7,918,638
Soybeans	4,810	9.77	6,408	67,624
Sunflowers	4,431	13.47	7,780	62,218
Other crops	2,965	1.12	5,543	546,757
Fruits total	2,453	2.15	5,012	254,878
Oats	1,200	4.20	2,216	57,512
Timber and Christmas trees	874	0.15	1,644	1,182,711
Pecans	383	0.31	704	244,426
Melons and vegetables	316	0.07	623	1,009,865
Barley	33	0.81	60	8,173
<b>Total crops</b>	<b>542,734</b>		<b>1,034,776</b>	<b>23,539,380</b>
<b>Livestock</b>				
Cow/calf and stockers	144,752	3.31	229,865	10,243,506
Milk	11,448	0.74	17,690	2,713,807
Poultry total	11,168	0.70	20,896	3,408,036
Milk cows	4,037	2.03	6,238	348,435
Goats	4,019	3.57	5,711	177,337
Other livestock products	1,186	12.65	1,686	14,767
Fed beef	630	0.02	1,000	6,046,223
Hogs	605	0.26	860	372,051
Sheep	599	0.99	851	94,838
Wool & mohair	2	0.02	3	12,368
<b>Total livestock and livestock products</b>	<b>178,446</b>		<b>284,802</b>	<b>23,431,367</b>
<b>Ag-related government payments</b>				
Direct payments-annual	5,207	1.37	4,499	363,732
Government payments-disaster	2,277	1.02	1,967	214,323
Counter Cyclical Payments-cotton	668	1.77	1,255	84,640
Pasture rainfall insurance	367	0.48	583	179,708
Government payments-conservation	190	0.10	164	174,198
Counter Cyclical Payments-Peanuts	4	0.10	7	8,120
<b>Total ag related</b>	<b>8,712</b>		<b>8,475</b>	<b>1,024,722</b>
<b>Land access fees</b>				
Hunting and fishing	1,821	0.30	3,079	1,095,859
Other recreation	992	0.74	2,160	293,924
<b>Total access fees</b>	<b>2,812</b>		<b>5,238</b>	<b>1,389,783</b>
<b>Total agriculture-related receipts</b>	<b>732,704</b>		<b>1,333,291</b>	<b>49,385,251</b>

\*Totals may not add due to rounding.



## Crop production

More than 20 different crops are produced commercially in the Metroplex. These include a variety of fruits and vegetables and major field crops. The area's climate and soil conditions are particularly well suited to the development of high-value specialty crops.

Primary crops include nursery crops, wheat, corn, grain sorghum, hay, and ensilage. The DFW region produces 19 percent of the state's nursery crops, 13 percent of the sunflowers, 10 percent of the soybeans, and 7 percent of the state's wheat.

The total value of all crops sold within the area was \$542.7 million. Nursery crops led with sales of \$296.9 million. Wheat accounted for \$49.8 million and Hay and Ensilage contributed \$43.6 million. Other grains with significant sales were corn and grain sorghum, which accounted for \$25.8 million and \$25.1 million respectively. Cash receipts for soybeans, cotton, fruits, vegetables, and other crops added \$101.4 million to the area economy. Crop production expenses create a multiplier effect on the regional and state economies. From 2010 to 2013, the annual average impact from DFW Metroplexes' crop production on the regional economy was estimated at \$1.03 billion.



**The DFW Metroplexes' crop production includes nursery crops, sorghum, corn, wheat, and cotton.**

## Livestock production

Livestock and livestock products include animals, poultry, and animal specialties such as wool. Total cash receipts of cow-calf and stocker operations, exceeded all other categories in this group at \$144.8 million. Dairy followed at \$15.5 million and poultry rounded out the top three with sales of \$11.2 million. Total sales for livestock and livestock products were \$178.4 million. There are approximately 203,000 cattle in the region—over 50,000 are beef cows. The regional impact from DFW livestock operations was estimated to be \$284.8 million.

## Ag-related payments

The government has made payments to production agriculture in the past. These payments were instituted to ensure an abundant food supply. An abundant food supply helps to keep food prices low and also stable. Direct payments and Counter Cyclical Payments (CCP) represent these funds provided to producers. An abundant food supply also depends on the production agricultural maintaining a large number of producers. Because this sector is vulnerable, the federal government provides financial assistance for drought and natural disasters and supplements premiums for rainfall shortage insurance. Finally, the federal government provides financial assistance to help offset the costs associated with conserving natural resources beyond natural market inclinations.



**DFW Metroplexes' livestock production can include everything from poultry, beef, and dairy cattle, to specialty products like wool.**

**Table 4. Agribusiness employment and payroll, Dallas-Fort Worth Metroplex area, 2012.**

	Number of employees	Annual payroll (\$1,000)
Wholesale trade	87,773	6,174,800
Retail trade and food service	65,662	1,660,460
Manufacturing	35,348	1,484,918
Transportation and warehousing	21,009	953,787
Agricultural services	496	11,507
<b>Total</b>	<b>210,288</b>	<b>10,285,472</b>

## Land access fees

Land access fees include revenue from hunting, fishing and other recreational activities and enterprises. Hunting and fishing revenue represent income from hunting leases (annual and seasonal), package hunts, and commercial fishing trips. Recreation revenue includes income from photography/birding, hiking and camping, off-road vehicle and biking, and other nature-based activities.

## Analysis of agribusiness

Agribusiness is a concept that includes more than just farmers and ranchers. A formal definition states that agribusiness involves “the sum total of all operations of the farm; and the storing, processing and distribution of farm commodities and the items made from them” (John H. Davis, Harvard University). Accordingly, many phases of the agricultural industry involve off-the-farm activities. Many consumers do not see food processing and clothing manufacture as a part of the agribusiness complex. It often takes an interruption in the process, such as a drought, to re-establish the link between products in marketplace and the base commodities produced on Texas farms and ranches.

According to 2012 Texas County Business Patterns, excluding government employees, there are approximately 210,290 salaried employees in agribusiness-related jobs in the DFW Metroplex

(Table 4). This same source shows that the area’s agribusiness complex accounted for a payroll of \$10.3 billion. Texas County Business Patterns, breaks the agribusiness sector into five categories: wholesale trade, retail trade and food service, manufacturing, transportation and warehousing and agricultural service.

The following is a discussion of the agribusiness components within each of the five categories in terms of their importance to the Metroplex’s overall economy.

## Wholesale trade

Agribusiness firms within the wholesale trade sector employed 87,773 people and had an annual payroll of \$6.2 billion. The wholesale trade deals in durable and nondurable goods.

Firms that handle nondurable goods are engaged in the distribution of paper and paper products, groceries and related products, and raw farm products. They employed 73,910 and paid \$5.3 billion in annual payroll. This category of wholesalers deals in general groceries, frozen foods, dairy products, poultry and meat and their respective products. This industry is responsible for servicing large supermarkets to small convenience stores.

Wholesalers of durable goods sell furniture, lumber, plywood and millwork, and farm machinery and equipment. These businesses



**The wholesale trade deals in nondurable goods including groceries and related products, paper and paper products, and raw farm products.**



**Table 5. Agricultural wholesale trade sector, Dallas-Fort Worth Metroplex, 2012.**

	Number of employees	Annual payroll (\$1,000)	Total establishments
Nondurable goods	73,910	5,291,112	4,081
Durable goods	13,863	883,688	1,092
<b>Total</b>	<b>87,773</b>	<b>6,174,800</b>	<b>5,173</b>

account for 13,863 employees and \$883.7 million in annual payroll.

The relationship between nondurable and durable goods is shown in Table 5.

## Retail food and trade service

The 2012 Texas County Business Patterns lists twelve three-digit NAICS retail trade categories in the DFW Metroplex, but only four of the twelve categories are considered agribusiness related for our purposes. The retail categories in this study are food and beverage stores, building materials and garden supplies, food services, and miscellaneous retail. These four industries employed 65,662 people and had an estimated annual payroll of \$1.66 billion in 2012, Table 6.

The food and beverage stores include grocery stores, meat markets, fruit and vegetable markets, candy stores, bakeries, and dairy products stores. Food stores are this study's largest segment in terms of annual payroll and employees—it accounts for 33,289 employees at an annual payroll of \$803.1 million.

Building materials and garden supplies include lumberyards, retail nurseries and garden stores. This group employed 14,479 people, with an annual payroll of \$477.8 million.

The food services category includes all businesses that serve food, from fast food to luxury dining. The annual payroll was estimated at \$223.9 million and the number of employees was 12,982 employees.

Miscellaneous retail includes florists, office supply stores, pet and pet supplies stores, art

**Table 6. Retail trade categories, Dallas-Fort Worth Metroplex, 2012.**

	Number of employees	Annual payroll (\$1,000)	Total establishments
Food and beverage stores	33,289	803,146	1,552
Building materials and garden services	14,479	477,829	714
Food service	12,982	223,961	603
Miscellaneous retail	4,912	155,524	1,083
<b>Total</b>	<b>65,662</b>	<b>1,660,460</b>	<b>3,952</b>

dealers, used merchandise stores, and other retail establishments. This group employed 4,912 people, with an annual payroll of \$155.5 million.

## Manufacturing

The 2012 Texas County Business Patterns lists 21 manufacturing industry groups. Of these, 11 are classified as agribusiness and considered relevant to the DFW area: Food and kindred products; beverage and tobacco products; textile mill products; apparel and other textile products; lumber and wood products; furniture and fixtures; paper and allied products; leather and leather products; petroleum and coal products; chemicals and allied products; and machinery, except electrical. These eleven agribusiness categories employed 35,348 people with an estimated 2012 payroll of \$1.5 billion (Table 7).

### **Food and kindred products**

This category includes firms that manufacture meat, dairy, bakery, sugar and confectionery products, fats and oils, and other food products. This is the largest category within agribusiness-related manufacturing, with 17,880 employees. It represents 50 percent of the total agribusiness employment in manufacturing. It also has the largest annual payroll of the 11 manufacturing groups, at \$724.3 million.



**Food and kindred products, which includes bakery and confectionery items among others, is the largest category within agribusiness-related manufacturing.**

### ***Paper and allied products***

Paper and allied products manufacturing employs approximately 4,250 people. The annual payroll is \$215.9 million. The category is made up of firms that produce folding paperboard boxes, corrugated and solid-fiber boxes, sanitary food containers, fiber cans and drums.

### ***Lumber and wood products***

This category includes everything made from lumber and wood products, except furniture. This category employs 4,966, with a \$169.6 million payroll. It consists of firms that produce millwork, plywood and structural members, wood containers, wood buildings, mobile homes and miscellaneous wood products.

### ***Furniture and fixtures***

Agribusiness is important to these companies because it supplies the cotton, textile fabrics and lumber used in many of their products. This industry employs 3,467 people and has an annual payroll of \$144.2 million.

### ***Beverage and tobacco products***

Beverage and tobacco products manufacturing include breweries, wineries, distilleries, and other companies producing beverages and tobacco products. This category employed 2,361 people with an annual payroll of \$141.1 million.

**Table 7. Agricultural manufacturing sector, Dallas-Fort Worth Metroplex, 2012.**

	Number of employees	Annual payroll (\$1,000)	Total establishments
Food and kindred products	17,880	724,255	336
Paper and allied products	4,258	215,911	101
Lumber and wood products	4,966	169,625	160
Furniture and fixtures	3,467	144,154	126
Beverage and tobacco	2,361	141,305	68
Textile mill products	1,141	38,417	103
Chemical and allied products	324	18,523	9
Apparel products	616	17,080	42
Machinery products	154	8,704	4
Petroleum and coal products	74	4,750	3
Leather and leather products	107	2,194	11
<b>Total</b>	<b>35,348</b>	<b>1,484,918</b>	<b>963</b>

### ***Textile mill products***

This manufacturing sector makes cloth from synthetic and natural fiber. The process includes both weaving and knitting, and the products are generally used in the apparel trade. This category employed 1,141 people and had a payroll of almost \$38.4 million in 2012.



**Manufacturing textile mill products involves making cloth from synthetic and natural fibers, using both weaving and knitting to produce items generally used in the apparel industry.**



**Manufacturing of chemicals and allied products includes fertilizers, ethanol, and other related products.**

### ***Chemicals and allied products***

This segment develops plant and livestock protection chemicals, fertilizer, and related products. This sector employed 324 people with an \$18.5 million payroll.

### ***Apparel products***

Apparel manufacturing encompasses the construction of apparel, hats, caps, and fabricated textile products, such as curtains, canvas, and automotive and apparel trimming. This industry employed 616 people with an annual payroll of \$17.1 million.

### ***Machinery products***

These businesses produce equipment to support production agriculture, such as feed mill components and livestock trailers. In 2012, this industry employed 154 people with an estimated payroll of \$8.7 million in 2012.

Petroleum and leather manufacturing are grouped together for this discussion because of their relatively small footprint in the area. Petroleum and coal manufacturing consists of businesses that produce lubricants and asphalt as well as offer marketing services to convenience stores and supermarkets. This industry employs

74 people with a \$4.7 million payroll. Leather and leather products manufacturing employed 107 people with an annual payroll of \$2.2 million.

## **Transportation and warehousing**

This group of firms includes those that warehouse, store and/or transport commodities. The total annual payroll for this category was estimated at \$953.8 million with approximately 21,000 employees (Table 4).

## **Agricultural services**

The agricultural services category includes three subsets: veterinary services, animal services (except veterinary), and landscape and horticultural services. It has approximately 496 employees and accounts for \$11.5 million in payroll (Table 4).

Although the Dallas-Fort Worth Metroplex is a highly developed urban center, agribusiness in this eight-county area is growing and continues to make a vital contribution to the region's economy.

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