



The impact of  
**AGRIBUSINESS**  
in the High Plains Trade Area



**DAVID SWINFORD**  
STATE REPRESENTATIVE

DISTRICT 87  
CARSON • MOORE • POTTER • SHERMAN COUNTIES

Dear Friends,

We live in the most powerful agricultural area in Texas. When we add the livestock industry to our food and fiber crops, very few areas in the world can come close to the economic impact we have on this great state. It is for that reason I have made agriculture the cornerstone of my public service.

As a member of the Texas House of Representatives Agriculture and Livestock Committee, it is my assignment to protect, preserve, and promote the agriculture of this state. Having the Amarillo Chamber of Commerce as a full partner in this endeavor is icing on the cake. You have been my best asset because of your knowledge and support of our region.

We are at a turning point as we see our farmers and ranchers fighting their way through droughts and low prices. They need you more than ever to help represent their needs not only to your members at the Chamber, but at the state level and nationally. I know our community and business leaders will continue to honor their commitment to agribusiness.

I am honored to have the opportunity to work with you on our common goals.

Sincerely,

*David Swinford*  
David Swinford  
State Representative  
District 87

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David Swinford





## INTRODUCTION

Agriculture is one of the primary drivers of the Texas High Plains economy, and this is one of the most unique and diversified agricultural areas in the world. The temperate weather conditions and the availability of irrigation water have made the area well suited to a number of agricultural enterprises, including more than 25 commercially grown crops and one of the most concentrated homes for confined-livestock operations in the world.



In this study, the importance of agriculture is examined for a 26-county region of Texas referred to as the "High Plains Trade Area." The counties in the area are selected on the assumption that Amarillo serves as their primary regional trade center. Parmer, Castro, Swisher, Briscoe, Hall and Childress counties serve as the southern border of the region, with all counties north in the Texas Panhandle being included. The area consists of 14 million acres of agricultural land with 9 million acres in pasture and 5 million acres in crops. Approximately 40 percent of the cropland is in irrigated production.

## DID YOU KNOW???

The Texas High Plains is one of the most important agricultural areas in the world. It can be difficult to conceptually grasp the magnitude of the industry. One way is to think of the 26 counties of the High Plains Trade Area — approximately 1/10th the size of Texas — as being a state. If it were a state, did you know that it would rank:

- 11th among all states in market value of all agricultural products sold.
- No. 2 in fed cattle marketed, just behind Kansas.
- From having virtually no hogs in 2000, the area now ranks 12th among all states in swine production.
- 13th in wheat production.
- 15th in production of each of the following commodities: corn, cotton, sorghum and dairy.



## THE AGRICULTURAL INDUSTRY

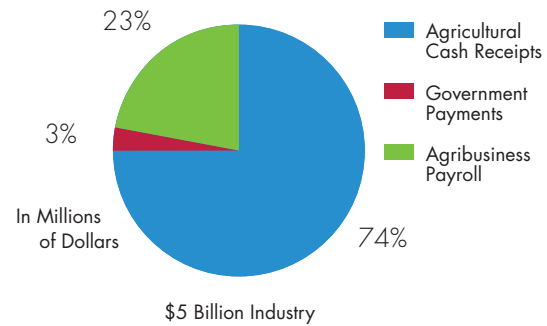
The contribution of the agricultural industry to the High Plains Trade Area economy is immense. The total of value-added agricultural commodities, government payments to producers and the payroll of agribusiness firms averaged more than \$5 billion per year in the trade area for 2005 through 2008. In all likelihood, \$5 billion underestimates dramatically the value of the agricultural industry. Data limitations result in the exclusion of public sector employees involved in agriculture, such as

Farm Service Agency, Texas AgriLife Research and Texas AgriLife Extension Service and the Natural Resource Conservation Service, among other public entities. In addition, the income derived from the 14,811 farm and ranch operators ("2007 Census of Agriculture") are not included in this analysis.

**Table 1.** Annual Total Agricultural Cash Receipts, Government Payments and Agribusiness Payroll, High Plains Trade Area 2005-2008.

Agricultural cash receipts	\$3,738,761,000
Government payments to farmers	\$146,142,000
Agribusiness payroll	\$1,130,781,000
<b>Total</b>	<b>\$5,015,684,000</b>

**VALUE OF AGRICULTURE  
IN THE HIGH PLAINS TRADE AREA**



## ANALYSIS OF PRODUCTION AGRICULTURE

The importance of production agriculture in the trade area cannot be overstated. Cash receipts for crops, value-added livestock and livestock products totaled in excess of \$3.7 billion in the High Plains Trade Area, Table 2. The current cash and value-added sales represent a 28.1 percent increase over the previous four-year period (\$2.9 billion). Of course, the direct value of agricultural production 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 wages at local businesses. Money is multiplied as it circulates through the economy. The original \$3.7 billion economic contribution from farm and ranch production leads to a total region-level economic output of \$6.5 billion. Some money does leave the region as people and businesses purchase goods and services outside the county or state. These leakages reduce the overall economic contribution of agricultural production. However, a good deal of the money that is spent outside the High Plains region is still spent in Texas, so the farm-level production leads to a larger state-level output of \$7.2 billion.

**Table 2.** Average Annual Agricultural Cash Receipts, High Plains Trade Area, 2005-2008.

	Value (\$1,000)	Percent of State Total	Regional Economic Impact (\$1,000)	State Economic Impact (\$1,000)
<b>Crops:</b>				
Corn	\$421,766	52.2%	\$681,359	\$711,938
Wheat	\$303,074	50.7%	\$489,613	\$511,586
Cotton	\$238,984	10.6%	\$368,017	\$381,172
Sorghum	\$110,053	18.6%	\$177,790	\$185,769
Ensilage	\$89,838	60.9%	\$155,582	\$160,332
Hay	\$30,958	4.0%	\$53,614	\$55,250
Other Crops	\$117,792		\$203,993	\$210,220
<b>Total Crop Receipts</b>	<b>\$1,312,465</b>		<b>\$2,129,968</b>	<b>\$2,216,267</b>
<b>Livestock and Livestock Products:</b>				
Fed Beef	\$1,508,688	73.6%	\$2,880,099	\$3,279,859
Other Beef	\$399,077	9.1%	\$761,841	\$867,585
Hogs	\$206,723	93.7%	\$283,165	\$311,392
Dairy	\$298,753	24.0%	\$420,897	\$466,059
Other	\$2,996		\$4,104	\$4,513
<b>Total L &amp; LP</b>	<b>\$2,416,237</b>		<b>\$4,350,106</b>	<b>\$4,929,408</b>
<b>Other Ag-Related</b>	<b>\$10,060</b>		<b>\$13,177</b>	<b>\$14,716</b>
<b>Total Agricultural Receipts</b>	<b>\$3,738,762</b>		<b>\$6,493,251</b>	<b>\$7,160,391</b>

## CROP PRODUCTION

The long growing season and irrigated land make the area ideally suited for growing any number of crops. Some of the best quality corn used in chip production is grown in the region. A variety of vegetables, in addition to all major field crops, are produced in the High Plains. The well-suited conditions provide an excellent potential for the development of high-value specialty crops in the area.



More than 25 crops are produced commercially in the High Plains Trade Area. Primary crops include corn, wheat, sorghum, ensilage, hay, soybeans, cotton and vegetables. Of the primary crops grown in the region, 52.2 percent of the state's corn, 50.7 percent of the wheat, 18.6 percent of the sorghum, 10.6 percent of the cotton, 60.9 percent of the ensilage and 4 percent of the hay are grown in the area.

The total value of all crops sold within the area was \$1.3 billion. Corn led the way with total sales of \$421.8 million. Wheat accounted for \$303.1 million in sales and cotton contributed \$239 million. Another grain with significant sales was sorghum, which accounted for \$110.1 million. Cash receipts for ensilage, hay, vegetables, soybeans, alfalfa and other crops contributed \$238.6 million to the area economy. The expenditures incurred in crop production result in a multiplier effect on the regional and state economies. The impact from High Plains' crop production on the regional and state economies was estimated to be \$2.1 billion and \$2.2 billion, respectively.

## LIVESTOCK PRODUCTION

Livestock and livestock products include animals, fowl, fish, animal specialties (such as wool) and recreational leases. Value-added sales of fed beef exceeded all other categories in this group, with \$1.5 billion. This was followed by "other beef", totaling \$399.1 million, which includes cow-calf and stocker operations. Dairy and swine operations rounded out the top four with sales of \$298.8 and 206.7 million, respectively. The total sales for livestock and livestock products were \$2.4 billion. The impact on the regional and statewide economies from High Plains' livestock operations was estimated to be \$4.4 billion and \$4.9 billion, respectively.

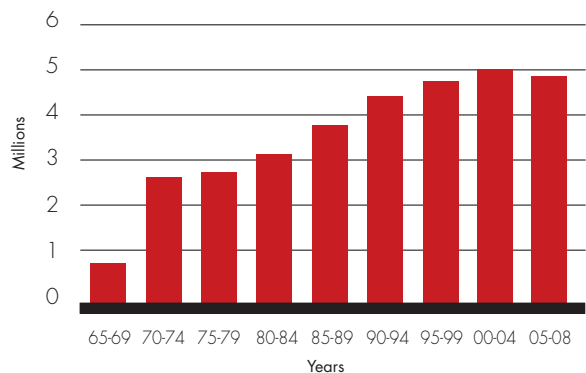


The Texas High Plains is often referred to as the Cattle Feeding Capital of the World and with just cause. If the 26-county area was considered a state, it would rank second in fed cattle production among all states. Fed cattle marketed in the area averaged just under 5 million head annually during the 2005-2008 time period, which corresponds to 73.6 percent of the state's total.

The fed cattle industry has served as the backbone for the development of one of the most highly productive agricultural regions in the world. The temperate climate and friendly environmental conditions have led to a steady increase in fed cattle since the industry's initial explosion in the early 1970s. Between 1969 and 2004, the growth in the fed cattle industry in the area averaged 100,000 head fed annually. The 2005-2008 average fed cattle marketings were down slightly from the previous period suggesting this industry may be reaching maturity in the region.

Cattle feeding is a capital-intensive, labor-efficient industry. However, it still provides an estimated employment for more than 2,500 employees in the High Plains Trade Area. The direct employment is just the tip of the iceberg with respect to the industry's economic impact. The cattle feeding industry has brought satellite industries, such as Tyson Fresh Meats, Excel Fresh Meats and JBS Swift, which are all major employers in the area. The industry's presence in the area results in price premiums for local cow-calf producers, stocker operations and grain farmers. Probably the best example of the immense magni-

FIVE-YEAR AVERAGE  
CATTLE FED IN 26-COUNTY AREA



tude of the cattle industry in the area is the realization that approximately 800,000 semi-loads of feed and cattle have to be moved annually to support the industry in the area at its current level of production.

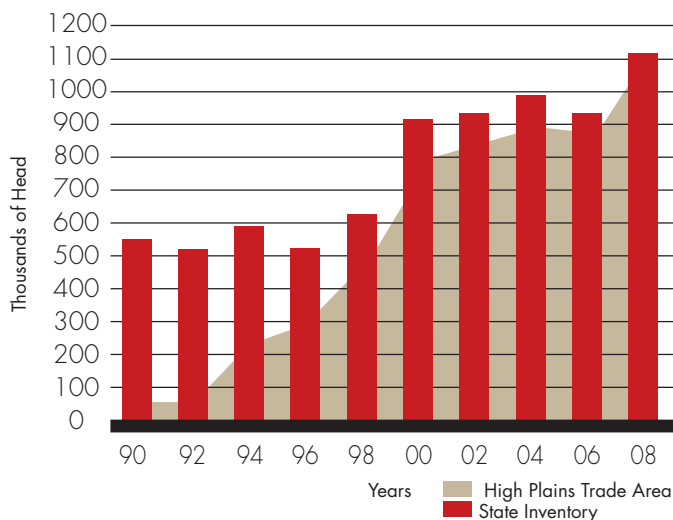
No discussion of production agriculture would be complete without mentioning the cow-calf industry, which has made the High Plains famous. Approximately 308,000 cows are in the region. Many of the historic ranches remain in operation today including the Frying Pan, LX, XL, JA, Bravo and LIT.

The development of the feedlot industry has changed the focus of many of the ranches from cow-calf to stocker operations. Combined with wheat production that provides lush winter pastures, the region has become one of the most concentrated areas of stocker production in the country. In any given year, well over a million stocker cattle are pastured in the Texas High Plains Trade Area.

Swine production has become an integral part of High Plains' agriculture. The same conditions that brought the cattle industry to the area attracted the hog industry. In 1992, 10 percent of the state's hogs were grown in the 26-county region. In 1993, inventories grew to 20 percent, and in 1994, the area's portion of the state's total doubled again to 40 percent. By 2009, the High Plains Trade Area hog numbers topped a million head and the area's total exceeded 94 percent of the state's hog inventory. Further expansion of the swine industry in the trade area is uncertain. Seaboard Farms, Texas Farm and Smithfield Inc. have all established significant hog operations in the Texas and Oklahoma panhandles. Any additional development in this industry will depend on whether another packing plant is built. At this time, there are no plans to build another plant in the region.

The future of production agriculture in the High Plains is a bright one despite current low commodity prices. In addition to the steadily rising fed cattle and hog numbers, a relatively new dairy industry is starting to blossom in the region that is and will be impacting the economy in the future.

HIGH PLAINS TRADE AREA & STATE HOG INVENTORY 1990-2008



The presence of dairy operations in the High Plains had decreased to virtually nothing by the early 1990s, with just a few left such as Hinders Dairy in Canyon. However, the trend has dramatically changed. In 2000, just 3,700 dairy cows were in the region; however, by 2009, dairy cow inventory exceeded 141,000 cows. Why? The Southwest Cheese Plant in Clovis opened in 2005 leading to a rapid expansion in dairy cow numbers in the region. Currently, this plant employs 240 people and requires 2.5 billion pounds of milk annually. The expansion in dairy cow inventories was escalated with the opening of the Hilmar Cheese Company located in Dalhart during 2007. This plant processes more than 5 million pounds of milk daily.

The impact of the dairy industry in the trade area is expected to increase dramatically over the next decade. The Southwest Cheese Plant plans to increase capacity 50 percent in 2010 and Hilmar Cheese Company has plans to double its facility in the next few years. Many of the dairies required to produce the milk will be located in the trade area. This will be a definite boost to the regional economy considering a 2,000-head dairy farm usually includes a \$2.5 million capital investment and generates about 25 jobs.

The agricultural-related category consists primarily of income from horse production. The "2007 Census of Agriculture" estimates the number of horses in the region at 19,355 head. While the inventory number in the region isn't large compared to other livestock operations, the economic importance of the equine industry is. It is estimated that \$1,950 is spent per horse in feed and care annually. Sales of horses often range from \$1,000 for a basic ranch horse to several \$1,000 for a show horse, providing significant income to the region.



The American Quarter Horse Association located in Amarillo records the pedigrees of 5.2 million American quarter horses in more than 80 countries and provides service to its 330,000 members. AQHA along with the American Quarter Horse Foundation employs 260 people, with an annual payroll of \$11.3 million.

The impact of the equine industry reaches far beyond the production of horses in the trade area. The American Quarter Horse Heritage Center and Museum and the Amarillo National Center attract equine events and visitors that add millions to the economy of the Texas High Plains each year.

# ANALYSIS OF AGRIBUSINESS

Agribusiness is a concept of the agricultural industry, which includes more than just farmers and ranchers. According to John H. Davis of Harvard University, who coined the term, 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." Thus, by this definition, many phases of the agricultural industry are off-the-farm activities. Many consumers do not think of the processing and manufacturing of clothing and food as being a part of the vast agribusiness complex. It often takes an interruption in the process, such as a drought, to re-establish the link between foodstuffs on the shelf of our favorite supermarket and the basic commodity produced on Texas farms and ranches.

According to "2007 Texas County Business Patterns" and the "2007 Census of Agriculture," there are approximately 53,263 salaried employees who work in jobs related to agribusiness in the High Plains Trade Area, excluding government employees, Table 3. These same publications show the area agribusiness accounted for a payroll of \$1.1 billion. In the publication "2007 Texas County Business Patterns," the agribusiness sector has been broken into five categories: retail trade and food service, wholesale trade, manufacturing, agricultural services and transportation and warehousing. The final category in Table 3, farm and ranch employment, was estimated from "2007 Census of Agriculture" data.

**Table 3.** Agribusiness Employment and Payroll, High Plains Trade Area, 2008

	Number of Employees	Annual Payroll (\$1,000)
Retail trade and food service	20,074	\$267,463
Manufacturing	13,340	\$419,212
Wholesale trade	4,689	\$195,415
Agricultural services	740	\$26,827
Transportation and warehousing	970	\$36,326
Farm and ranch	<u>13,451</u>	<u>\$185,538</u>
<b>Total</b>	<b>53,264</b>	<b>\$1,130,781</b>

In the following section, the agribusiness components within each of the six categories are discussed in terms of their importance to the overall economy of the area.



## MANUFACTURING

"2007 Texas County Business Patterns" lists 19 manufacturing industry groups. Of these, 10 were classified as agribusiness with eight considered relevant to the area: food and kindred products; textile mill products; apparel and other textile products; lumber and wood products; furniture and fixtures; paper and allied products; leather and leather products; chemicals and allied products; and machinery, except electrical. These nine agribusiness industries employed 13,340 people with an estimated 2008 payroll of \$419,212,000, Table 4.

### Food and Kindred Products

This category includes firms that manufacture meat products, dairy products, bakery products, sugar and confectionery products, fats and oils, and other food products. This industry is the largest of the agribusiness-related manufacturing industries, with a total of 12,327 employees or 92.4 percent of the total agribusiness employment in manufacturing. This industry also has the largest annual payroll of the nine manufacturing groups, at \$368,556,000.



Most of the employment in the agricultural manufacturing sector is directly related to livestock processing. The eight packing plants in the area, including such nationally known firms as Tyson Fresh Meats, Excel Fresh Meats and JBS Swift, had an estimated 8,170 salaried employees with an annual processing capacity of 4.9 million head. A number of other well-known companies are in the agricultural manufacturing sector in the trade area, such as Arrowhead Mills and Hilmar Cheese.

### Lumber and Wood Products

This category includes everything made from lumber and wood products, except wood furniture. This industry employs 101, with a \$2,341,000 payroll. This category is made up of firms that produce millwork, plywood and structural members, wood containers, wood buildings, mobile homes and miscellaneous wood products.

## Leather and Leather Products

Manufacturers of leather and leather products contribute substantially to the trade economy. In 2007, this industry employed 30 people with an estimated 2008 payroll of \$1,259,000.

## Furniture and Fixtures

Agribusiness is important to these manufacturing companies because it supplies the cotton, textile fabrics and lumber used in many of their products. This industry employs 159 people and has an annual payroll of \$3,608,000.

## Paper and Allied Products

The manufacturing of paper and allied products accounts for the employment of approximately 175 people. The annual payroll is \$7,127,000. The category consists of firms that produce folding paperboard boxes, corrugated and solid-fiber boxes, sanitary food containers, fiber cans and drums.

## Textile Mill Products

This industry makes cloth from synthetic and natural fiber. The process includes both weaving and knitting, and the products generally used in the apparel trade. This area business employed 255 people and had a payroll of almost \$10,786,000 in 2008.

## Chemicals and Allied Products

This segment develops plant and livestock protection chemicals, fertilizer and related products. One hundred forty people with a \$10,560,000 payroll were employed in this sector.

## Machinery and Apparel Manufacturing

Machinery and apparel manufacturing were consolidated in this publication due to the relatively small size of these enterprises in the area. Machinery manufacturing includes businesses that produce equipment to support production agriculture, such as the manufacturing of feed mill components and livestock trailers. Apparel manufacturing encompasses the construction of apparel, hats, caps and fabricated textile products, such as, curtains, canvas, and automotive and apparel trimming. Fourteen companies employing 153 people with an annual payroll of \$14,974,000 were involved in these two groups.

**Table 4.** Agricultural Manufacturing Sector, High Plains Area, 2008.

	Number of Employees	Annual Payroll (\$1,000)	Total Establishments
Food and kindred products	12,327	\$368,556	71
Lumber and wood products	101	\$2,341	9
Leather and leather products	30	\$1,259	5
Furniture and fixtures	159	\$3,608	18
Paper and allied products	175	\$7,127	3
Textile mill products	255	\$10,786	7
Chemical and allied products	140	\$10,560	5
Machinery and apparel mfg.	153	\$14,974	14
<b>Total</b>	<b>13,340</b>	<b>\$419,211</b>	<b>132</b>

## Wholesale Trade

Agribusiness firms within the wholesale trade sector employed 4,689 people and had an annual payroll of \$195,415,000. Wholesale trade consists of durable goods and nondurable goods. Firms which handle nondurable goods are engaged in the distribution of paper and paper products, groceries and related products, and raw farm products. They employed 4,332 and paid \$182,804,000 in annual payroll. This category is made up of wholesalers who deal in general groceries, frozen foods, dairy products, poultry and poultry products, and meat and meat products. This industry is responsible for servicing all types of grocery stores, from large supermarkets to small convenience stores. The major wholesalers involved in paper products and groceries are Ben E. Keith, Georgia Pacific, Affiliated Food and White Swan. The relationship between durable and nondurable goods is shown in Table 5.

Agribusiness components of the durable goods category are wholesalers of furniture, lumber, plywood and millwork, and farm machinery and equipment. These businesses account for 357 employees and \$12,611,000 in annual payroll. Farm machinery, furniture, lumber and plywood, and millwork were the largest durable goods wholesalers. A few of the companies in these groups are Lazy Boy, Oglesby Equipment Co., Western Equipment and Hill Tractor Company.

**Table 5.** Agricultural Wholesale Trade Sector, High Plains Trade Area, 2008.

Goods	Number of Employees	Annual Payroll (\$1,000)	Total Establishments
Nondurable goods	4,332	\$182,804	180
Durable goods	357	\$12,611	37
<b>Total</b>	<b>4,689</b>	<b>\$195,415</b>	<b>217</b>





## Retail Trade and Food Service

"2007 Texas County Business Patterns" lists eight retail trade categories in the High Plains Trade Area, but only four of the eight categories were determined to be agribusiness related. The retail categories used in this study were food services, food and beverage stores, building materials and garden supplies, and miscellaneous retail. These four industries employed 21,784 people and had an estimated annual payroll of \$330,616,000 in 2008, Table 6.

The food services category includes all places serving food, from fast food to luxury dining. It is the largest segment in this study in terms of annual payroll and number of employees and accounts for 13,260 employees and an annual payroll of \$150,340,000. There are 752 restaurants. A few of the best known are Arby's, Dairy Queen, McDonald's, Burger King, KFC, Taco Bell, Wendy's, Pizza Hut, Outback Steakhouse, Texas Roadhouse and the locally owned Big Texan Steak Ranch.

Food stores include grocery stores, meat markets, fruit and vegetable markets, candy stores, bakeries and dairy product stores. They had an annual payroll of \$52,987,000 and 3,733 employees. This category includes stores such as United, Albertson's, Allsup's and Toof'n Totum.

Building materials and garden supplies include lumber yards, retail nurseries and garden stores. This group employed 1,628 people, with an annual payroll of \$43,610,000. The major retailers are Coulter Gardens and Nursery, Love and Sons Nursery, Lowe's, Amarillo Building Products Inc. and Canyon Drive Lumber Company.

## Agricultural Services

This category includes three sub-headings of agricultural services: veterinary services, animal services (except veterinary), and landscape and horticultural services. It has approximately 740 employees and accounts for \$26,827,000 in payroll, Table 6.



## Transportation and Warehousing

This group of firms includes those that warehouse, store and/or transport commodities. Eighty-four companies were engaged in these trades within the study area. Companies, such as Attebury Grain and Sunray Co-op fall into this category. The total payroll for this category was estimated at \$36,326,000 with approximately 970 employees, Table 6.

**Table 6.** Retail Trade, Agricultural Services, Transportation and Financial Categories, High Plains Trade Area, 2008.

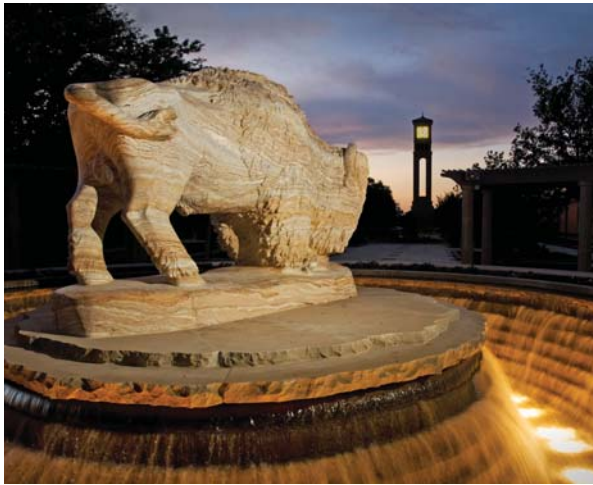
	Number of Employees	Annual Payroll (\$1,000)	Total Establishments
Food service	13,260	\$150,340	752
Food and beverage stores	3,733	\$52,987	147
Building materials & garden services	1,628	\$43,610	163
Miscellaneous retail	1,453	\$20,526	163
Agricultural services	740	\$26,827	82
Transportation and warehousing	970	\$36,326	84
<b>Total</b>	<b>21,784</b>	<b>\$330,616</b>	<b>1,391</b>

## Farm and Ranch

"2007 Texas County Business Patterns" underestimates agricultural employment, since it does not include farm/ranch employment in its data set. Interestingly, in addition to the traditional farm and ranch workers, employees of confined-livestock operations fall into this category. According to the "2007 Census of Agriculture," 6,887 people were employed more than 150 days a

year and another 6,346 were employed less than 150 days a year on farms/ranches in the High Plains' Trade Area. These employees received an estimated \$185,538,000 in wages during 2008. Some of the major confined livestock operations in the area include Friona, Caprock, Cactus, Texas Farm, Smithfield and AZTX.

It should be noted that considering farm and ranch employees improves the estimates of agricultural employment in the private sector, however, still significantly undervalues the importance of agriculture to the trade-area economy. According to the "2007 Census of Agriculture," there are 14,811 farm and ranch operators in the area. Since these operators receive no salary, their impact is not accounted for in this publication. In addition, employees in the public sector related to agriculture were not accounted for in this analysis.



## Higher Education, Agricultural Research and Extension

West Texas A&M University, a member of The Texas A&M University System, is located in Canyon and provides opportunities for higher education in the region. Students of West Texas A&M can pursue undergraduate and graduate degrees, including a Ph.D., in a number of agricultural fields as well as business, nursing, education and



engineering among others. The Department of Agricultural Sciences includes agribusiness; agricultural business and economics; agricultural education; agricultural media and communications; animal science; dryland agriculture; environmental agriculture; equine industry and business; and plant, soil and environmental sciences. These programs focus on undergraduate and graduate education and research in areas of critical importance to the High Plains of Texas. Research on semi-arid agriculture, water management, equine nutrition and management, issues related to concentrated livestock operations, environmental quality and agricultural pest management are key areas of study for master's and doctoral students.

Texas AgriLife Research and Extension Center at Amarillo is the regional home of faculty and staff of Texas AgriLife Research and Texas AgriLife Extension Service, two of the seven agencies in the Texas A&M System. The chief mission of these agencies is to conduct research and educational programs that develop and transfer new technology to benefit area producers. AgriLife Research and AgriLife Extension programs address: alternative irrigated and dryland crop production systems; improved wheat genetics; insects and disease control; conservation tillage; residue management and grazing systems; beef cattle nutrition, health and waste management; water and air quality; bioenergy and natural resource management. The Center is headquarters for AgriLife Extension's county agent program for 22 counties in the Panhandle, which provides a delivery network for science-based information, training and educational programs in agriculture, family and consumer sciences, 4-H and youth development and community enrichment.



In addition, West Texas A&M University, Texas AgriLife Research, Texas AgriLife Extension Service, the U.S. Department of Agriculture-Agricultural Research Service Conservation and Production Laboratory at Bushland and the Texas Veterinary Medical Diagnostic Laboratory collaborate through an organization known as the Cooperative Research Education and Extension Team. It operates with a one-program concept of scientific, educational and extension expertise of the combined faculties and scientists of these five agencies. The CREET members have a shared commitment to upgrading scientific excellence and multidisciplinary teamwork among 80 scientists and engineers in five different agencies/universities and at the multiple locations. CREET is an excellent example of interagency coordination and cooperation.

Three junior colleges, Frank Phillips, Amarillo College and Clarendon Community College, offer technical training as well as preparatory courses for four-year institutions. In particular, Clarendon Community College provides a two-year ranch and feedlot operations program.

## Significance of the Findings

The development of the feedlot industry in the Texas High Plains has led it to become one of the most significant agricultural regions in the world. A similar trend in swine production, coupled with an emerging dairy industry, suggests agriculture will become even more important in the future. Production agriculture already contributes \$3.7 billion in value-added production to the trade area. The current cash and value-added sales represent a 28.1 percent increase over the previous four-year period (\$2.9 billion). The original \$3.7 billion economic contribution from farm and ranch production leads to a total region-level economic output of \$6.5 billion and contributes to a larger state-level impact of \$7.2 billion.

Production agriculture in the High Plains Trade Area is a major component of Texas agriculture. More than 21 percent of all cash receipts for crops and livestock in Texas come from the 26-county trade area. Seventy-four percent of the state's fed beef, 93.7 percent of the hogs,



24 percent of the dairy cows, 52.2 percent of the corn, 50.7 percent of the wheat, 18.6 percent of the sorghum and 60.9 percent of the ensilage are produced in the region. If the trade area was considered a state, it would rank as high as 2nd to a low of 15th among all states in the production of these commodities.

Agribusiness in the private sector was estimated to employ 53,263 people in the private work force in the High Plains Trade Area with an associated payroll exceeding \$1.1 billion. In reality, employment is much greater in the agribusiness sector in the trade area. Data limitations result in the exclusion of public sector employees involved in agriculture, such as Farm Service Agency, Texas AgriLife Research, Texas AgriLife Extension Services and Natural Resource Conservation Service, among other public entities. In addition, the income derived from the 14,811 farm and ranch operators ("2007 Census of Agriculture") are not included in this analysis.

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 layout and Design by Cenvo-Trafton

