

# Economic Impacts of Agriculture and Recreation in the Winter Garden

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Agriculture and recreation in the Winter Garden employ 6,300 people and generate \$447 million in economic activity. The economic impacts of crops, livestock, hunting and recreation were estimated using IMPLAN, an input/output model. Economic multipliers for each sector of the economy are used to estimate how a change in one sector affects business activity, value-added and employment in other sectors of the economy.

Output refers to total sales for a sector such as corn or vegetables. Value Added is employee compensation, proprietor income, rents and royalties, and payment of indirect business taxes, and is a component of Output. Value Added is often referred to as income or gross state product. Employment is reported as total jobs, with full-time and part-time jobs each counting the same.

Table 1 Winter Garden Economic Baseline  Summary	Output		Value Added		Employment	
	Value of Production	Total Economic Output	Farm Level	Total	Farm Level	Total
	(\$)		(\$)		(Jobs)	
<b>Baseline Impacts</b> (2005-08 Average)	\$289,752,320	\$447,099,061	\$111,209,204	\$186,376,865	4,050	6,308

The Baseline Impacts include both irrigated and dryland crop production, livestock, hunting and recreational activities in the Winter Garden, which consists of Frio, Medina, Uvalde, and Zavala counties. These activities were averaged for the period 2005-2008 to reduce annual variability. The total value of production averaged \$290 million/year for the period. Applying the Winter Garden total economic multiplier of 1.54 results in a total economic impact of \$447 million with \$157 million of that attributed to supporting economic activities such as input supply. The total value added was \$186 million with \$111 million attributed directly to agriculture and agricultural-related sectors.

Major activities supporting agricultural production in the Winter Garden include crop spraying, land surveying, soil preparation, and custom planting and harvesting operations, wholesale and retail trade, banks, real estate, grocery stores and restaurants, fertilizer, fuel and transportation. Total employment for the region is 6,308 workers: 4,050 are employed on the farm and another 2,258 work in non-agricultural sectors.

While a crop-by-crop analysis for irrigation versus non-irrigation was not performed for the Winter Garden, evidence from a previous analysis for Uvalde County suggests that a loss of irrigation water could be detrimental to the Winter Garden economy. Without irrigation, the Winter Garden would lose at least \$55 million in vegetable and melon production, \$22 million in additional economic activity, and 872 jobs. In Uvalde County, production, economic impact, and employment for cotton and corn would both decrease by more than 60 percent without irrigation, while sorghum would decline 36 percent and wheat by 23 percent. If this pattern held throughout the Winter Garden, a significant loss in economic activity would occur.

Livestock, hunting and recreation have a total economic impact of \$247 million on the economy. Slightly more people are employed in crops than in livestock, hunting and recreation. Vegetables and melons, corn, and cotton account for 70 percent of the total economic impact of crops and two-thirds of

the employment. Cattle operations contribute \$195 million in economic activity and account for nearly 80 percent of non-crop economic activity. These same operations also employ 2,300 people. Should less water be available in the region, livestock, horticulture, corn and cotton would be the most affected sectors.

Hunting is the most important non-agricultural activity, contributing \$37 million in total economic impact and employing 284 people. Recreation employs nearly 200, but its economic impact is much smaller at \$8 million.

<b>Table 2</b> <b>Crop, Livestock, Hunting &amp; Recreation Impacts</b>	<b>Economic Impacts of Winter Garden Agriculture and Ag-Related Industries</b>		
	<b>Crops</b>	Value of Production	Total Economic Impact
Vegetables and Melons	\$54,991,670	\$77,031,482	872
Corn	\$24,564,340	\$33,318,378	1,028
Cotton	\$20,361,150	\$26,471,636	314
Hay	\$11,863,300	\$17,118,212	183
Peanuts	\$9,702,220	\$13,999,870	150
Sorghum	\$8,499,300	\$11,528,210	356
Wheat	\$4,359,620	\$5,913,266	183
Oats	\$4,041,030	\$5,481,139	169
Cottonseed	\$3,858,220	\$5,016,092	60
Pecans	\$2,982,930	\$3,979,219	44
Sesame/Sunflowers	\$538,560	\$691,021	10
<b>Total Crops</b>	<b>\$145,762,340</b>	<b>\$200,548,525</b>	<b>3,369</b>
<b>Livestock, Hunting &amp; Recreation</b>			
Cattle Feedlots	\$35,737,450	\$67,230,240	793
Cow/Calf Operations	\$68,018,480	\$127,958,180	1,510
Goats	\$4,537,600	\$6,184,919	154
Hunting	\$29,474,500	\$36,753,665	284
Recreation	\$6,221,950	\$8,423,532	198
<b>Total Livestock, Hunting &amp; Recreation</b>	<b>\$143,989,980</b>	<b>\$246,550,536</b>	<b>2,939</b>
<b>Total Crops, Livestock, Hunting &amp; Recreation</b>	<b>\$289,752,320</b>	<b>\$447,099,061</b>	<b>6,308</b>

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