

ORGANIC AGRICULTURE IN TEXAS

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Sales of Texas agricultural organic products had a dramatic increase (by more than 113 percent) over recent years, according to the United States Department of Agriculture (USDA). Data from the 2019 Organic Survey reveal that state sales of organic vegetables, fruits, field crops, and livestock increased from \$199 million in 2014 (sales from certified and exempt farms) to \$424 million in 2019. Additionally, Texas organic acreage increased by 97 percent from 2014 to 246,307 organic certified¹ acres in 2019. A total of 233 certified organic farms were reported in the state—31 percent more than in 2014. The data used in this report were collected in 2008, 2014, and 2019 by the USDA National Agricultural Statistics Service (USDA NASS). Compared to previous surveys (i.e., 2008 and 2014), 2019 data do not consider exempt organic farms. In this report we concentrated on production and market trends in certified organic agriculture.

Across the United States (U.S.), the value of organic agriculture grew from \$5.46 billion to \$9.93 billion (82 percent) over that same period. As in Texas, organic acreage increased nationwide by 51 percent. In terms of organic farms, it is estimated that 16,476 farms were organic certified in the country in 2019—31 percent more than in 2014.

In 2019 state rankings, Texas moved back to the fifth place in total sales (Table 1). Idaho and North Carolina replaced Colorado and Iowa in the Top 10 list.

ORGANIC PRODUCT MIX

In 2019, more than half the value of Texas organic sales came from livestock and poultry products, such as milk and eggs. Sales totaled \$227.1 million in livestock and poultry products, \$111.6 million in crop products, and \$35.5 million in livestock and poultry (Fig. 1).

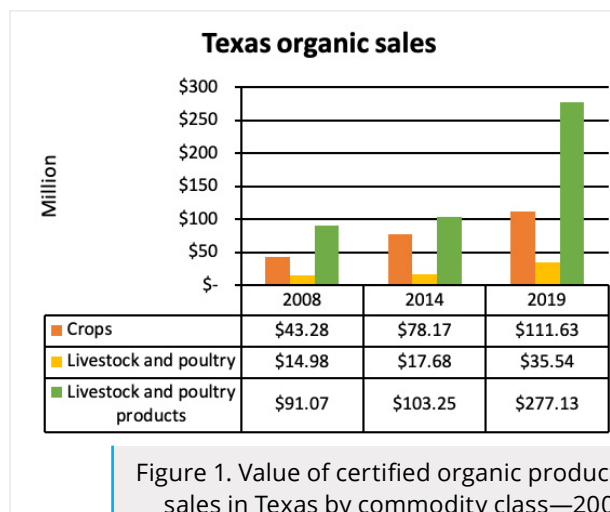


Figure 1. Value of certified organic products sales in Texas by commodity class—2008, 2014, and 2019 (million \$).

Source: USDA

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¹According to the USDA, certified organic farms may display the USDA organic seal on their products and must be certified organic by the state or by a private agency accredited by the USDA.

Table 1. Top states based on certified organic sales in 2008, 2014, and 2019 (million)

2008			2014			2019		
Rank	State	Sales	Rank	State	Sales	Rank	State	Sales
1	California	1,149	1	California	2,231	1	California	3,597
2	Washington	282	2	Washington	515	2	Washington	886
3	Pennsylvania	213	3	Pennsylvania	313	3	Pennsylvania	742
4	Oregon	156	4	Oregon	237	4	Oregon	454
5	Texas	149	5	Wisconsin	201	5	Texas	424
6	Wisconsin	133	6	Texas	199	6	North Carolina	370
7	New York	105	7	New York	164	7	New York	298
8	Vermont	73	8	Colorado	147	8	Wisconsin	269
9	Iowa	72	9	Michigan	125	9	Michigan	231
10	Idaho	71	10	Iowa	103	10	Idaho	206

Source: USDA

In contrast, crop products were the main source of revenue for U.S. organic producers. In 2019, they sold \$5.8 billion in crops (76 percent more than 2014), \$2.5 billion in livestock and poultry products, and \$1.7 billion in livestock and poultry (Fig. 2)

CROP MIX

Texas differed markedly from the nation overall in the types of crops with the highest sales (Fig. 3). Over 80 percent of the state's organic crop sales in 2019 were generated by field crops—those that produce fiber, such as cotton, or feed for animals, such as corn, hay, and soybeans.

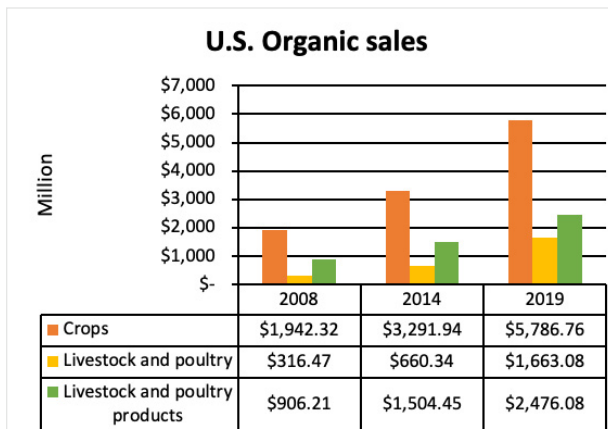
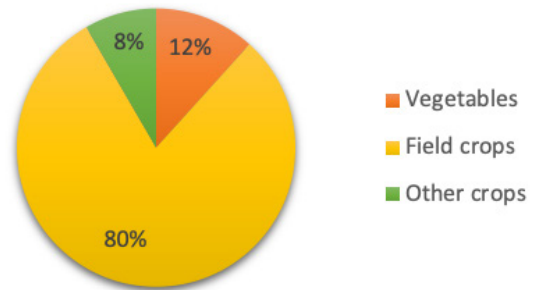


Figure 2. Value of certified organic products sales in the U.S. by commodity class—2008, 2014, and 2019 (million \$).

Source: USDA

Texas organic crop mix



U.S. organic crop mix

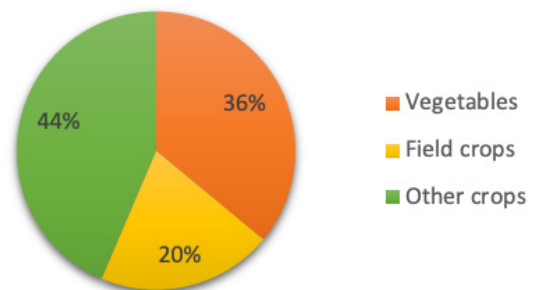


Figure 3. Mix of certified organic crop products in the U.S. and Texas in 2019.

Source: USDA

Table 2. Top 2019 certified organic field crops based on value of sales (\$1,000)

Texas			U.S.		
Crop	Value	%	Crop	Value	%
Peanuts	33,750	37.8%	Corn	278,157	23.6%
Corn	14,715	16.5%	Hay	191,994	16.3%
Cotton*	13,337	14.9%	Wheat	149,113	12.6%
Rice	11,008	12.3%	Soybeans	108,999	9.2%
Wheat	6,475	7.3%	Haylage and greenchop	47,059	4.0%

*Estimated value based on national expected revenue. *Source: USDA*

Table 3. Texas Top 5 certified organic vegetables by sales in 2008, 2014, and 2019 (\$1,000)

2008		2014		2019	
Crop	Value	Crop	Value	Crop	Value
Beans, Snap	878	Open field tomatoes	1,259	Spinach	4,243
Squash	154	Squash	1,086	Watermelons	1,698
Onions	107	Potatoes	572	Lettuce	1,269
Open field tomatoes	67	Watermelon	494	Open field tomatoes	981
Peppers, bell	26	Broccoli	372	Broccoli	129

Source: USDA

Of the remaining crop sales in the state, vegetables brought in 12 percent, and other crops 8 percent. Other crops include fruits, nuts, nursery crops, and crops produced under protected structure. At the national level, vegetables accounted for about 36 percent of organic sales, field crops generated 20 percent of total value, and a mix of other crops represented 44 percent of total organic sales in the country.

FIELD CROPS

The top organic crops in Texas were peanuts, corn, cotton, rice, and wheat, which combined, constituted 88.8 percent of the state's organic field crops sold. Nationwide, 65.7 percent of all organic field crops sales were for the categories of corn, hay, wheat, soybeans, and haylage and forage greenchop (Table 2).

VEGETABLE CROPS

Texas organic vegetable sales changed dramatically between the 2014 and 2019 USDA organic surveys, with two of the top five crops in 2014 (squash and potatoes) dropping off the list in 2019, and open field tomatoes falling from the top to the fourth position. Spinach and watermelons were the state's top sellers among organic vegetables in 2019, followed by lettuce, open field tomatoes, and broccoli (Table 3).

Nationwide, lettuce and spinach continued in the first and second position of top sellers among organic vegetables, respectively. Carrots fell from fourth to fifth in sales from 2014 to 2019, and potatoes and open field tomatoes replaced broccoli and sweet potatoes (Table 4).

FARMS AND FARMLAND

The number of Texas acres devoted to organic production (including cropland, pastureland, and rangeland) increased dramatically by about 97 percent from 2014 to 2019. The increase in certified organic acreage contrasts with the 60 percent reduction in organic farmland observed from 2008 to 2014 (Table 5).

U.S. certified organic acreage rose by about 51 percent from 2014 to 2019—a significant recovery from the 10 percent decrease reported from 2008 to 2014.

An estimated 4.08 million acres (certified and exempt farms) were considered organic in the country in 2008, compared to 3.64 and 5.5 million certified organic acres in 2014 and 2019, respectively.

The number of operating certified organic farms in Texas increased from 178 in 2014 to 233 farms in 2019. A similar trend was observed at the national level, where the number of operating certified organic farms increased from 12,353 to 16,476 farms during

Table 4. U.S. Top 5 certified organic vegetables by sales in 2008, 2014, and 2019 (\$1,000)

2008		2014		2019	
Crop	Value	Crop	Value	Crop	Value
Lettuce	186,290	Lettuce	263,837	Lettuce	400,117
Open field tomatoes	58,566	Spinach	117,053	Spinach	179,498
Spinach	37,364	Broccoli	78,740	Potatoes	154,936
Onions, dry	33,438	Carrots	69,084	Open field tomatoes	132,332
Broccoli	33,111	Sweet potatoes	68,043	Carrots	131,807

Source: USDA

Table 5. Top states based on certified organic acreage in 2008, 2014, and 2019

2008			2014			2019		
Rank	State	Acreage	Rank	State	Acreage	Rank	State	Acreage
1	Wyoming	677,147	1	California	685,848	1	California	965,257
2	California	470,903	2	Montana	317,878	2	Montana	355,723
3	Texas	314,279	3	Wisconsin	226,056	3	New York	323,081
4	Montana	284,482	4	New York	210,871	4	Wisconsin	250,940
5	Wisconsin	195,603	5	Oregon	203,555	5	Texas	246,307
6	New York	168,428	6	North Dakota	134,632	6	Nebraska	231,833
7	Colorado	153,981	7	Minnesota	131,239	7	Vermont	203,002
8	North Dakota	152,728	8	Wyoming	128,502	8	Oregon	196,045
9	Idaho	148,425	9	Texas	125,373	9	Idaho	180,732
10	Nebraska	146,188	10	Idaho	125,011	10	Minnesota	172,968

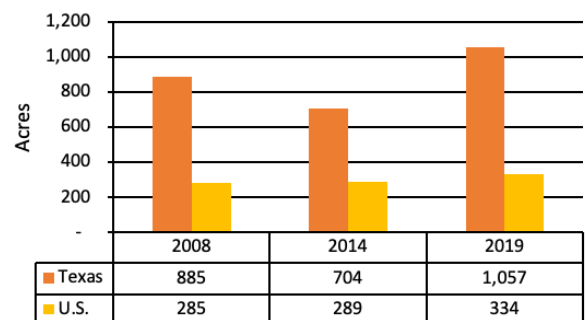
Source: USDA

that period. According to the USDA Organic Integrity Database, in 2021, there were 384 organic certified crop operations, 32 certified livestock operations, and 417 certified handlers in Texas.

In 2014, the average Texas organic farm at 704 acres averaged more than twice the 289-acre average of its national counterpart. In 2019, the average Texas farm size increased to 1,057 acres, compared to an average of 334 acres for a certified organic farm nationwide (Fig. 4).

SHARE OF TOTAL SALES

In 2019, 40 percent of the certified organic farms in Texas produced and sold only organic products (Fig. 5). The remaining 60 percent of certified organic farms sold a mix of conventional and organic products. Particularly, 8 percent of Texas organic sales represented between 75 to 99 percent of total sales, 20 percent of Texas farms' organic sales accounted for between 50 and 74 percent of total sales, and less than 49 percent of overall sales came from marketing organic products for 31 percent of



*The 2008 numbers include both certified and exempt organic acres.

Figure 4. Average size of certified organic farms in the U.S. and Texas in 2008, 2014, and 2019.

Source: USDA

the certified organic operations in Texas. Nationwide, 56 percent of certified organic farms produced and sold only organic products, and the remaining 44 percent marketed both conventional and organic products.

FARM PROGRAMS

In 2019, 26 percent of certified organic farms in Texas participated in the national Organic Certification Cost Share Program (Fig. 6). This program provides financial assistance to producers and handlers of agricultural products who are obtaining or renewing their certification under the USDA National Organic Program. In the U.S., 44 percent of certified organic farms participated in the program.

Lower enrollment numbers were observed for the Environmental Quality Incentives Program (EQIP) Organic Initiative in Texas and the U.S. The EQIP Organic Initiative program provides technical and financial assistance to farmers interested in organic production. In 2019, 6 and 8 percent of the certified organic farms in Texas and the U.S. enrolled in the program, respectively.

A different degree of participation in crop insurance programs was also observed among certified organic farms. In Texas, 56 percent of certified organic farms had all acreage covered by an insurance crop program, and 21 percent of certified organic farms did not have crop insurance coverage at all (Fig. 7). Nationwide, a more modest participation rate was reported. Namely, in 2019, only 14 percent of U.S. certified organic farms had all their acres covered by a crop insurance program, and 74 percent had no insured acres.

ORGANIC PRODUCTION PRACTICES

From 2014 to 2019, the number of certified organic farms in Texas and the U.S. increased by about 31 and 33 percent, respectively. This is reflected in the number of years the farms have been involved in organic agricultural production. In Texas, 24 percent of farms had less than 5 years involved in certified organic agricultural production, 39 percent of farms had between 5 and 9 years of experience, and 37 percent of farms have been involved in certified organic production for 10 or more years (Fig. 8). In the U.S., 52 percent of organic farms had less than 10 years involved in certified organic agricultural production, and the remaining 48 percent had more than 10 years of experience.

In terms of production practices implemented by certified organic producers, the most popular practices in both Texas and the U.S. in 2019 were the use of water management practices, maintaining buffer strips, and

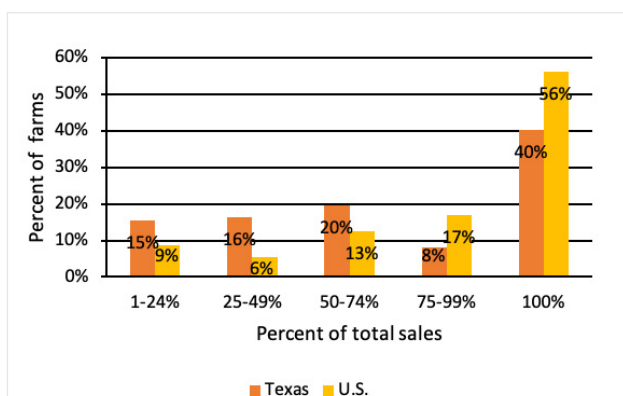


Figure 5. Percent of farms by percent of total value of sales from organic production.

Source: USDA

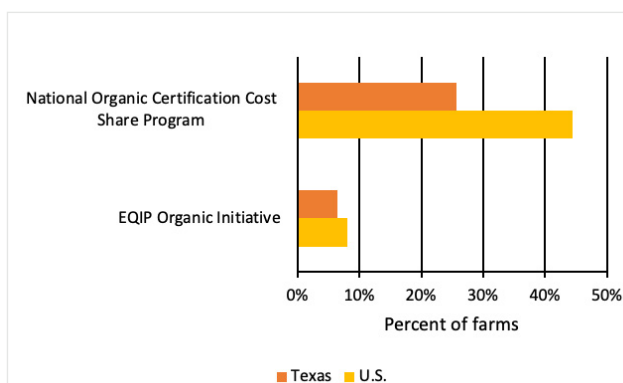


Figure 6. Percent of farms that participated in farm programs in Texas and the U.S., 2019.

Source: USDA

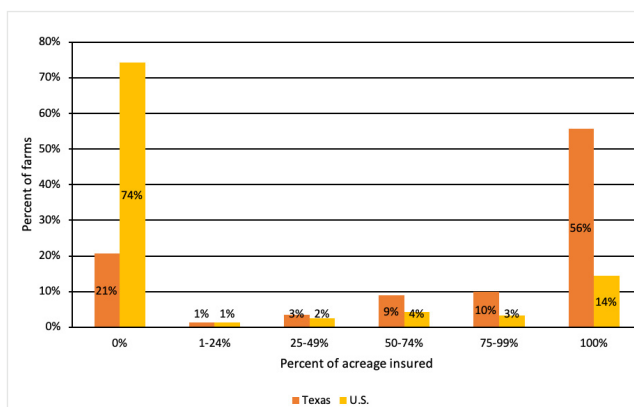


Figure 7. Percent of certified organic farms by percent of organic acres covered by crop insurance in the U.S. and Texas, 2019. (Numbers do not all add up to 100 percent, due to rounding.)

Source: USDA

the use of animal manure (Fig. 9). Overall, with the exception of the use of water management practices and maintaining buffer strips in Texas and practicing rotational grazing at the national level, the implementation of all other production practices considered in the survey dropped compared to the adoption rates observed in 2014.

Organic farmers also reported on the main production challenges they face. In both Texas and the U.S., regulatory problems were identified as the main concern by over 46 percent of farmers (Fig. 10). Other production challenges encountered by organic farmers are price issues, production problems, and market access.

FUTURE PRODUCTION PLANS

Production expectations for the next five years differed among farmers. In 2019, 43 percent of organic farmers in Texas considered that they planned to maintain the current level of organic production, and 24 percent of organic farmers in the state anticipated to increase their production (Fig. 11). Only 9 percent of Texas organic farms intended to decrease their organic production, and 23 percent of them were unsure about their future production plans.

As in Texas, most U.S. organic farmers planned to maintain their production (44 percent of farms), 29 percent projected to increase their organic production, and only 2 percent considered discontinuing organic production.

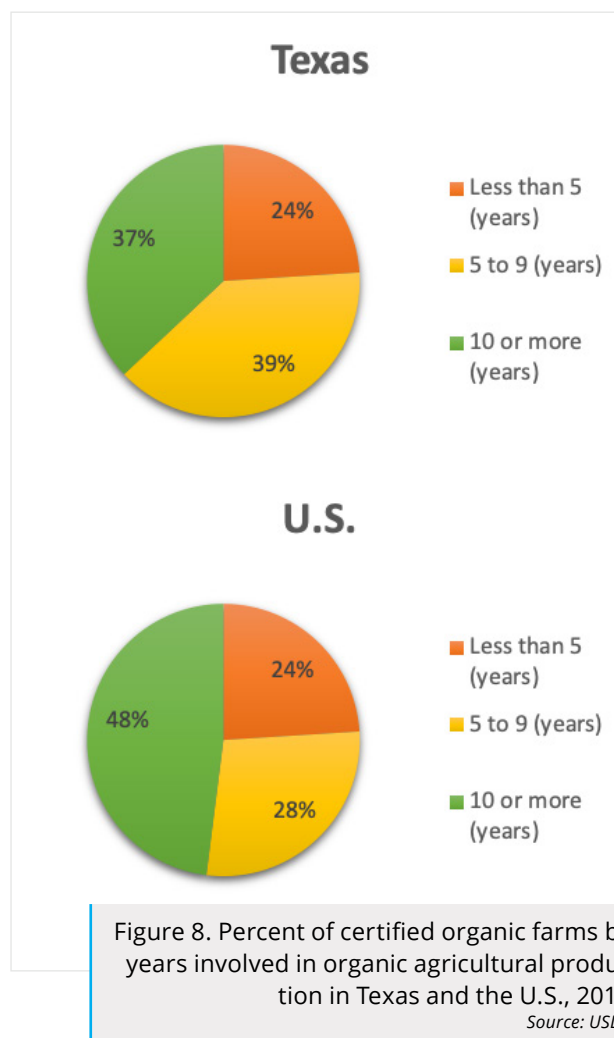
CONVENTIONAL AGRICULTURE

Organic products constitute a small but growing fraction of the total U.S. and Texas agricultural output. Only 1.7 percent of Texas and 2.6 percent of U.S. agricultural sales are for organic products. Most U.S. farmers and ranchers use conventional methods, meaning they use synthetic pesticides, fertilizers, feed additives, and other continual inputs.

Compared to organic agriculture, Texas conventional acreage decreased by 2.7 percent from 2014 to 2019. However, the number of conventional farms increased by about 1 percent during the same period. Sales for conventional agriculture in Texas dropped by 1.8 percent from 2012 to 2017 (Table 6).

Across the nation, conventional agriculture sales decreased by 1.6 percent (from 2012 to 2017). From 2014 to 2019, acreage reduced by 1.3 percent, and the number of farms declined by 2.8 percent.

In 2019, organic operations in Texas had average annual sales of \$1,821,042 per farm, compared to average annual sales of \$100,907 in 2017 for conventional farms.



ECONOMIC CONTRIBUTION OF ORGANIC PRODUCTION IN TEXAS

The direct economic impact generated by organic agriculture in Texas is magnified through the local economy, and the overall effect is captured by the derived economic output, value-added, labor income, and employment indicators. Economic output is a measure of gross business activity and represents the gross expenditures resulting from direct, indirect, and induced business activity. Value-added is economic output minus intermediate purchases from other sectors and represents the industry's contribution to the state's gross domestic product (GDP). Labor income includes employee compensation (salary, wages, and benefits) and sole proprietor income. Employment represents the number of full-, part-time, and seasonal employees, including sole proprietors.

Organic crop production leads to a total statewide economic output of \$241.7 million annually, including \$129.8 million contribution to gross regional product (value-added) and \$99.0 million in labor income, and

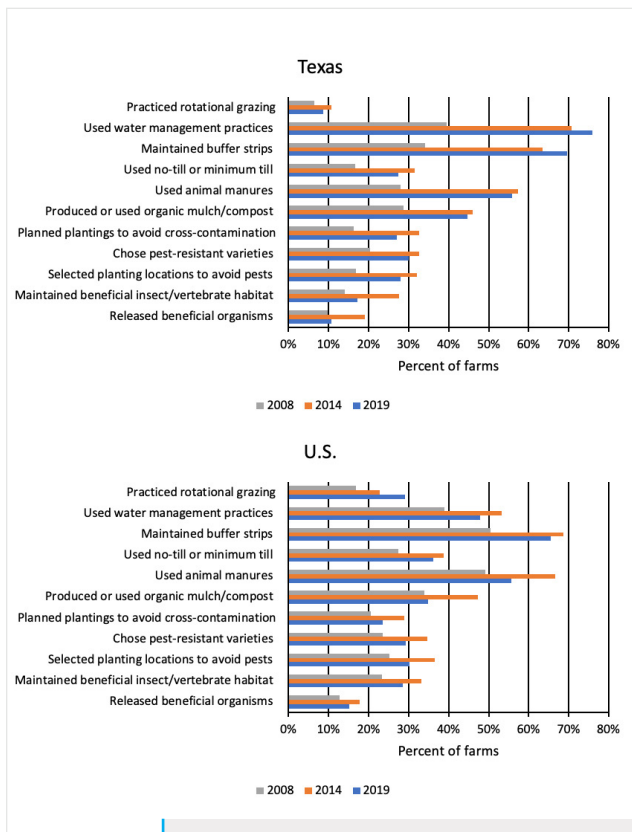


Figure 9. Organic production practices in Texas and the U.S., 2019.
Source: USDA



Figure 10. Major production challenges on Texas and the U.S. organic farms in 2008, 2014, and 2019.
Source: USDA

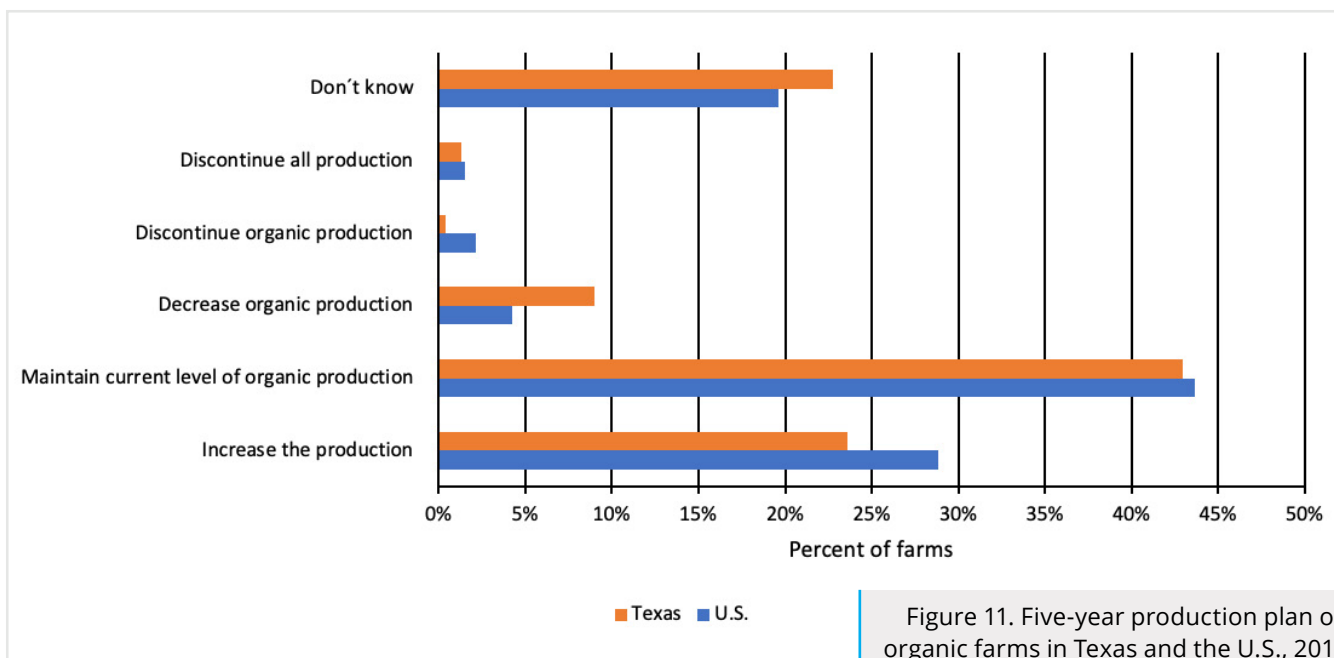


Figure 11. Five-year production plan on organic farms in Texas and the U.S., 2019.
Source: USDA

Table 6. Number of farms (million), number of acres (million acres), and sales value (\$ billion) for conventional agricultural production in the U.S. and Texas for 2008, 2014, and 2019

	Texas			U.S.		
Measure	2008	2014	2019	2008	2014	2019
Total land in farms	130.4	130.0	126.5	919.9	908.9	897.4
Total number of farms	0.25	0.25	0.25	2.20	2.08	2.02
Average farm size (acres)	527	530	512	418	436	444
	2007	2012	2017	2007	2012	2017
Value of sales						
Total	21.0	25.4	24.9	297.2	394.6	388.5
Livestock and livestock products	14.4	18.0	18.0	153.6	182.2	195.0
Crops	6.6	7.4	6.9	143.7	212.4	193.5

Source: USDA NASS

Table 7. Economic Contribution of Organic Production in Texas (million), 2019

	Organic Sales	Output	Value-Added	Labor Income	Employment
Crops	\$111.63	\$241.68	\$129.79	\$99.00	4,781
Livestock & Poultry	\$35.54	\$75.27	\$33.75	\$19.09	820
Livestock & Poultry Products	\$277.13	\$621.95	\$213.83	\$129.48	2,720
Total	\$424.30	\$938.90	\$377.38	\$247.57	8,322

about 4,780 full- and part-time jobs. Labor income is a component of value-added, which is part of output, so the figures in Table 7 cannot be summed.

Organic livestock and poultry production is associated with a total statewide economic output of \$75.3 million annually. This total contribution includes \$33.8 million contribution to value-added, \$19.1 million in labor income, and about 820 full- and part-time jobs across the state.

Organically produced livestock products (e.g., milk and eggs) contributed an additional \$621.9 million in total output, \$213.8 million in value-added, \$129.5 million in labor income, and about 2,720 full- and part-time jobs across the state.

Total organic sales (crops, livestock and poultry, and livestock and poultry products) in the state totaled \$424.3 million in 2019. These organic sales supported \$938.9 million in output, \$377.4 million in value-added, \$247.6 million in labor income, and about 8,320 full- and part-time jobs across the Texas Economy.

FOR MORE INFORMATION

Additional data from the Organic Production Surveys is posted at the USDA National Agricultural Statistics Service, https://www.nass.usda.gov/Surveys/Guide_to_NASS_Surveys/Organic_Production/

Other agricultural information is available from the Quick Stats Database, USDA National Agricultural Statistics Service, https://www.nass.usda.gov/Quick_Stats/

USDA Organic INTEGRITY Database, <https://organic.ams.usda.gov/integrity/>

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