

Food and Fiber System Important Part of Economy

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The food and fiber system's (FFS) share of total gross domestic product (GDP) was 12.8 percent in 2000 (table 1). Actual levels of employment and GDP increased in almost every year since 1991, though shares have mostly dropped. In 1991, the FFS share of GDP was 14.8 percent. Growing output (in dollars) and employment (in jobs) reflect a move by both domestic and foreign consumers away from low-value bulk commodities toward more high-value processed products.

Still, employment generated by the FFS has trended downward from 18.5 percent of the U.S. total in 1991 to 17.1 percent in 2000. High labor productivity in the farm sector coupled with stable demand for agricultural and food products (compared with an expansive non-farm economy) produced a diminishing relative share of total employment and GDP.

The food and fiber system as a whole added \$1.26 trillion to U.S. GDP in 2000. Of this, \$757 billion came from manufacturing and distribution, while \$426 billion came from inputs (table 2). The farm

sector by itself accounted for \$82 billion, a \$15-billion increase over 1999.

Food and fiber industries generate benefits to the economy in different ways, exhibiting wide differences between contributions to GDP and share of employment. In some industries—mining, food processing, and tobacco, for example—the share contributed to GDP was more than twice the share of employment. By contrast, the relatively low-wage, labor-intensive foodservice sector's job share was more than twice its value-added share.

These estimates were derived using a much more industry-specific and precise measure of implicit price deflators than those that appeared in previous editions of *Rural America*. These deflators allow a true measure of value generated in an industry versus that which may be due solely to price inflation. While the job and employment estimates of the FFS remain the same, GDP dropped significantly from 1999's estimate of \$1.521 trillion of FFS GDP (*Rural America*, Vol. 16, No. 1), because of the switch in methodological tools.

The food and fiber system comprises the producers of goods and services required to assemble, process, and distribute raw farm products to U.S. and foreign consumers. Food and fiber system employment estimates are developed using a national input-output model that describes input use and factor payments for each sector of the economy. The model is used to estimate the amount of employment in each sector needed to support the final demands for agricultural products. Thus, this measure may include jobs in all sectors of the economy, even those where the link to agriculture is weak. Unlike the farm-related employment measure, food and fiber sector estimates do not count all jobs in a particular sector; only the jobs needed to support demand for agricultural products are counted. Food and fiber sector estimates are closely aligned with the U.S. Department of Commerce's National Income and Product Accounts. [RA](#)

Table 1

Key statistical indicators of the food and fiber system

Measure/Industry	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<i>Billion dollars</i>										
GDP:										
Farm	69.3	75.5	70.2	77.8	73.5	85.7	82.6	74.0	66.9	82.0
Food processing	109.7	112.9	114.5	123.4	116.6	124.7	134.2	146.1	155.9	165.2
Textiles	25.2	25.9	27.1	28.2	28.4	31.2	30.2	31.2	34.5	34.2
Other manufacturing	105.6	109.4	109.8	115.4	112.7	111.2	109.0	106.4	104.6	110.4
Services	190.7	205.5	216.9	234.6	246.6	258.5	272.9	293.4	316.0	335.7
Trade	241.3	247.2	260.3	279.1	294.2	293.4	295.6	299.7	314.9	337.7
Transportation	30.4	30.8	32.2	33.2	35.1	33.5	35.8	39.2	40.5	42.9
Eating places	115.0	117.6	126.5	134.9	141.1	140.2	141.7	142.8	147.2	156.4
Total FFS	887.2	924.8	957.6	1,026.6	1,048.2	1,078.5	1,101.9	1,132.7	1,180.6	1,264.5
Percent of U.S. GDP	14.8	14.6	14.4	14.6	14.2	13.8	13.2	12.9	12.7	12.8
Total U.S. GDP ¹	5,986.2	6,318.9	6,642.3	7,054.3	7,400.5	7,813.2	8,318.4	8,781.5	9,268.6	9,872.9
<i>Million jobs</i>										
Employment:										
Farm	2.0	1.9	1.8	1.9	2.0	2.0	1.9	1.8	1.8	1.7
Food processing	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.3
Textiles	1.1	1.0	1.0	1.0	1.0	1.1	1.0	0.9	1.0	0.9
Other manufacturing	1.5	1.5	1.4	1.5	1.4	1.4	1.3	1.3	1.3	1.2
Services	3.3	3.3	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Trade	7.3	7.3	7.5	7.7	7.9	7.9	7.9	8.1	8.3	8.4
Transportation	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Eating places	6.0	6.0	6.3	6.4	6.5	6.5	6.5	6.6	6.6	6.6
Total FFS	23.4	23.1	23.5	24.1	24.5	24.2	24.1	24.2	24.4	24.1
Percent of U.S. employment	18.5	18.0	18.2	18.4	18.5	18.1	17.7	17.5	17.5	17.1
U.S. civilian labor force ²	126.3	128.1	129.2	131.1	132.3	133.9	136.3	137.7	139.4	140.9

¹U.S. Department of Commerce. Value-added data presented here are consistent with U.S. Department of Commerce, National Income and Products Accounts, accounting conventions.

²U.S. Department of Labor, Bureau of Labor Statistics.

Table 2

Contribution of the food and fiber system to the U.S. economy, 2000

Industry	Value added to GDP	Share of FFS contribution to GDP	Share of GDP	Number of workers	Share of FFS employment	Share of total U.S. employment
	<i>Billion dollars</i>	<i>Percent</i>		<i>Thousands</i>		<i>Percent</i>
Farming	82.0	6.5	0.8	1,716	7.1	1.2
Total inputs	426.0	33.7	4.3	4,696	19.4	3.3
Mining	17.0	1.3	0.2	61	0.3	--
Forestry, fishing, and agricultural services	14.5	1.1	0.2	414	1.7	0.3
Manufacturing	90.0	7.1	0.9	1,177	4.9	0.9
Services	304.2	24.1	3.1	3,044	12.6	2.2
Total manufacturing and distribution	757.0	59.9	7.7	17,738	73.5	12.6
Manufacturing:						
Food processing	165.2	13.1	1.7	1,306	5.4	0.9
Textiles	34.2	2.7	0.3	880	3.6	0.6
Leather	0.1	--	--	2	--	--
Tobacco	20.0	1.6	0.2	30	0.1	--
Distribution:						
Transportation	42.9	3.4	0.4	597	2.5	0.4
Wholesaling and retailing	337.7	26.7	3.4	8,352	34.6	5.9
Foodservice	156.4	12.4	1.6	6,567	27.2	4.7
Total food and fiber system	1,264.5	100.0	12.8	24,145	100.0	17.1

-- = less than .05 percent.

Source: Calculated by ERS using data from the U.S. Departments of Commerce and Labor.