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U.S. Farm and Farm-Related Employment in 1989

Where Are Jobs in Farming and Its Related Industries Most Important?

T. Alexander Majchrowicz Jacqueline L. Salsgiver

In this report... Farm and farm-related employment involves a diverse group of industries, ranging from farm operations to grocery stores that sell farm products. These farm and farm-related industries provided over 23 million jobs, or 17.3 percent of U.S. employment, in 1989. Much of this employment is only peripherally linked to farming, with more than 15.5 million jobs in farm-related wholesale and retail trade industries or indirect agribusinesses. But, the jobs in farming and its closely related industries that supply agricultural inputs and process and market commodities have a direct effect on many local economies, providing 25 percent or more of total employment in 865 of the approximately 3,100 U.S. counties.

Farming and farm-related industries provided 23.2 million jobs in 1989, the most recent year for which data are available. Agricultural wholesale and retail trade establishments, such as grocery stores and eating and drinking places, accounted for the largest share of farm-related employment with 13 million jobs (fig. 1). These jobs, plus an additional 2.6 million positions in indirect agribusinesses such as machinery repair shops, are only peripherally related to farming. Over 80 percent of trade and indirect agribusiness employment is located in metro counties. Farming and its more closely related industries accounted for 7.6 million jobs. almost half of which are in nonmetro counties. Farm production employment, which includes farm proprietors and hired farmworkers, provided 3.2 million jobs. Agricultural service positions, such as farm labor contractors and veterinarians, and jobs in forestry and fishing accounted for 843,000 workers. Approximately 426,000 jobs were in industries that supply agricultural fertilizers and other inputs. Firms that process and market agricultural commodities

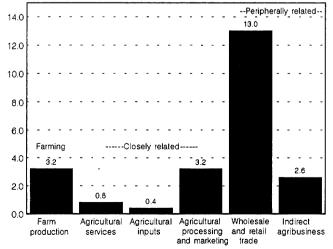
provided another 3.2 million jobs (see app. table 1 for definitions and a list of industries in each group).

The terms "jobs" and "employment" are used interchangeably throughout this report. Estimates of both total U.S. employment and farm and farmrelated employment include wage and salary jobs and self-employed persons. These estimates are directly comparable with those in "U.S. Farm and Farm-Related Employment in 1988," AIB-634, December 1991. New in this report are separate estimates of farm production jobs and agricultural service employment. Also, farm and farm-related employment statistics, by State, are shown in appendix table 2.

Figure 1

Farm and farm-related employment, 1989

Most employment was in agricultural wholesale and retail trade. Employment in millions



Farm and Farm-Related Jobs Up Slightly in 1989

Farm and farm-related employment grew by almost 323,000 jobs during 1988-89, with most of the increase in agricultural wholesale and retail trade industries. Although the number of jobs rose, farm and farm-related employment's share of total U.S. employment declined.

Farm and farm-related industries provided 23.2 million jobs in 1989, a gain of 0.3 million from the previous year (fig. 2). While farm and farm-related jobs increased, their share of total U.S. employment fell from 18 percent in 1988 to 17.3 percent in 1989. Among industries, farm production employment--the total of farm proprietors and wage and salary farmworkers--accounted for 3.2 million jobs, or 114,000 fewer than in 1988. Farm proprietors decreased by 27,000, continuing their long-term decline as capital replaces labor in farming. Hired farmworkers slipped more sharply, declining by almost 87,000. But, some of the decrease in hired farmworkers reflects changes in data. Data were available for all four quarters in 1989, whereas the previous year's estimate was based on data that excluded the traditionally low-employment January to March quarter.

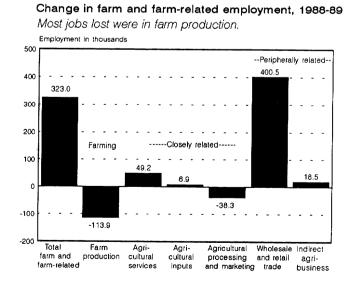
Some industries closely related to farming also lost employment during 1988-89. Agricultural processing and marketing industries, including firms that manufacture beverage, dairy, textile, tobacco, and leather products, lost a net total of 38,000 jobs during 1988-89, the largest decline among the farmrelated industries. Although several processing and marketing industries, principally meat and fruit and vegetable processors, expanded in the period, job gains were outweighed largely by a decrease of over 36,000 jobs in apparel and textiles manufacturing.

Other industries considered closely linked to farming gained jobs from 1988 to 1989. Industries that manufacture or supply fertilizers, farm equipment, and other agricultural inputs added 6,900 jobs. Employment in agricultural services, forestry, and fishing increased by 49,000 jobs. Much of this gain is tied to the diversity of firms found in the agricultural services category, which encompasses not only firms supplying onfarm services, such as crop and harvesting, but also companies providing ornamental tree and lawn care services. Over threequarters of the growth in agricultural services was in metro counties, an indicator that some of the new service jobs may not be linked to farming.

Agricultural wholesale and retail trade industries had the strongest farm-related employment growth, adding over 400,000 jobs during 1988-89. Trade industries accounted for 13 million, or 56 percent, of all farm and farm-related employment in 1989. These industries have a peripheral relationship to farming and include establishments that sell groceries, beer, and candy, as well as eating and drinking places that serve prepared food. Employment growth in these industries does not depend on economic conditions on the farm but is driven more by population growth and changing consumer tastes and preferences.

Indirect agribusinesses gained almost 19,000 jobs during 1988-89. This sector represents an assortment of establishments with relatively minor linkages to farming, ranging from repair and service shops for tractors to manufacturers of prefabricated metal buildings.

Figure 2



Most Farm and Farm-Related Jobs Are in Metro Areas, but Such Jobs Account for a Larger Share of Employment in Nonmetro Counties

Aithough 71 percent of all farm and farm-related jobs are in metro areas, most of these jobs are in agricultural wholesale and retail trade industries that have weak links to farming. Two-thirds of all farm production employment remains in nonmetro counties.

Over 6.7 million, or 29 percent, of all farm and farmrelated jobs were in nonmetro counties in 1989, unchanged from 1988 (table 1). While most farm and farm-related jobs were concentrated in metro counties, these jobs accounted for only about 15 percent of total metro employment but about 26 percent of all nonmetro employment.

The size and importance of farming and certain farm-related industries differ between metro and nonmetro counties. Over 66 percent of all farm production jobs were in nonmetro counties, accounting for 31 percent of all nonmetro farm and farm-related employment. Nonmetro counties contained only 19 percent of all agricultural wholesale and retail trade jobs, but these jobs provided 37 percent of nonmetro farm-related employment. In contrast, farm production jobs accounted for only 6.5 percent of total farm and farm-related employment in metro counties. Agricultural wholesale and retail trade jobs, almost 81 percent of which were in metro counties, made up 64 percent of metro farm-related employment.

Table 1--Farm and farm-related employment, 1989

Most farm and farm-related jobs were in metro areas.

Industry	Metro	Nonmetro	Nonmetro share	
	Million		Percent	
Total employment ¹	108.0	25.7	19.2	
Farm and farm-related	16.4	6.7	29.0	
Farming:				
Farm production	1.1	2.1	66.1	
Closely related:				
Agricultural services	.6	.2	25.4	
Inputs	.2	.2	50.9	
Processing and marketing	2.0	1.2	38.0	
Food and kindred products	1.0	.5	31.1	
Apparel and textiles	.8	.6	43.4	
Other	.2	.2	51.0	
Peripherally related:				
Wholesale and retail trade	10.5	2.5	19.1	
Indirect agribusiness	2.1	.5	19.6	

¹Numbers and percentages may not add to total because of rounding.

Nonmetro Reliance on Farm and Farm-Related Jobs Differs by Region

Nonmetro counties in the Northern Plains depend the most on farm and farm-related industries for jobs. These industries account for almost 31 percent of the region's total nonmetro employment, with about half of the farm and farm-related jobs in farm production.

Farm and farm-related industries' share of total nonmetro employment ranged from a high of 31 percent in the Northern Plains to a low of 20 percent in the Northeast (table 2, app. fig. 1). The composition of farm and farm-related employment in these two regions differs markedly. Of all nonmetro jobs in the Northern Plains, farm production accounts for over 14 percent and agricultural input industries almost 2 percent, and both percentages are highest among regions. In the urbanized Northeast, farm production provides only 3.4 percent and agricultural inputs 0.3 percent of total nonmetro employment; both percentages are lowest among regions.

Agricultural services were relatively more important to nonmetro counties in the Pacific than to any other region. There, about 2 percent of nonmetro employment was in the agricultural service sector, principally forestry operations in Washington and Oregon. Although these jobs are an important part of nonmetro economies in the Pacific, over 86 percent of the region's agricultural service jobs were in metro counties. Most of the metro service jobs were in landscape and horticultural services such as lawn and garden care and ornamental shrub and tree services.

Agricultural processing and marketing industries accounted for over 8 percent of farm and farmrelated jobs in the nonmetro areas of the Southeast and Appalachia. Apparel and textile manufacturing in these regions contributed about 65 percent of all processing and marketing jobs. In contrast, only about 2 percent of the Mountain region's farm and farm-related jobs were in processing industries.

Table 2--Share of total nonmetro employment by farm and farm-related industry and region, 1989

Farm production accounted for the largest share of nonmetro employment in the Plains States.

Region	Total farm and farm-related industries ¹	Farm production	Agricultural services	Agricultural inputs	Agricultural processing and marketing	Wholesale and retail trade	Indirect agri- business
	Percentage of nonmetro employment						
United States	26.2	8.2	0.8	0.9	4.7	9.7	2.0
Appalachia	27.9	7.5	.6	.5	8.1	9.1	2.1
Corn Belt	26.5	9.9	.6	1.2	3.3	9.2	2.3
Delta States	26.7	8.1	.8	.9	6.1	8.7	2.1
Lake States	27.8	9.7	.7	1.1	3.1	10.6	2.6
Mountain	22.0	6.9	.7	1.0	1.8	10.6	1.1
Northeast	20.3	3.4	.9	.3	3.0	10.3	2.4
Northern Plains	30.9	14.4	.6	1.8	4.1	8.8	1.2
Pacific	26.1	8.7	1.9	.7	2.0	11.1	1.7
Southeast	27.8	5.6	.9	.7	8.7	9.8	2.2
Southern Plains	27.5	12.4	.6	.9	3.3	9.0	1.4

¹Percentages may not add to total because of rounding.

Many Counties Depend on Farming and Closely Related Industries for Jobs

Agricultural employment, or those jobs in farming and its closely related industries, accounts for 25 percent or more of total employment in 865 of some 3,100 U.S. counties. In 702 of these counties, termed agricultural employment-dependent, farm production provides 50 percent or more of the agricultural employment.

Nearly 30 percent of all U.S. counties, 850 nonmetro and 15 metro, are agricultural employmentdependent counties (fig. 3). Agricultural employment-dependent counties have 25 percent or more of their employment in farm production and its closely related industries: agricultural services, forestry, and fishing; agricultural inputs; and agricultural processing and marketing. Wholesale and retail trade of agricultural products and indirect agribusiness, with only indirect linkages to farming, are not included in agricultural employment.

When agricultural employment-dependent counties are categorized by the industry that contributes 50 percent or more of the county's agricultural employment, 702 rely on farm production, 65 on fiber processing, 32 on food processing, and 1 each depends upon agricultural services and agricultural inputs (figs. 4 and 5). An additional 64 counties are diverse, having no single industry that contributes 50 percent or more of their agricultural jobs (table 3).

More than half of all agricultural employmentdependent counties are concentrated in the Northern and Southern Plains and Corn Belt. These counties are relatively more important in the Northern Plains where they account for over 64 percent of the counties. All but six of the Northern Plains' agricultural employmentdependent counties rely principally on farm production for jobs.

Only three regions, Appalachia, Delta States, and Southeast, have agricultural employment-dependent counties in which fiber processing (apparel and textile manufacturing) is the principal agricultural industry. Counties that rely on food processing for jobs are less concentrated. Food processing counties, many of which have substantial meat processing employment, are adjacent to agricultural employment-dependent counties that rely on farm production for jobs. These counties are scattered throughout the Corn Belt, Delta States, Great Plains, Southeast, and Appalachia.

Agricultural services, forestry, and fishing are the principal agricultural industries only in Heard County, Georgia. The county's agricultural employment is comprised of wage and salary jobs in forestry and self-employment in other agricultural services. Washington County, Alabama, is the one county in which agricultural inputs is the principal agricultural industry. Most of the county's agricultural employment is in pesticides and agricultural chemical manufacturing.

What Are Agricultural Employment-Dependent Counties?

Agricultural employment-dependent counties differ from farming-dependent counties defined in the USDA classification of nonmetro counties by principal economic activity or demographic base. The farmingdependent classification includes those counties where farming accounted for a weighted annual average of 20 percent or more of total labor and proprietor income over a selected 5-year period. See Data Sources and Definitions for further details.

Agricultural employment-dependent counties, 1989

Agricultural employment accounted for 25 percent or more of total employment in nearly 30 percent of all U.S. counties.



Figure 4

Farm production counties, 1989

Of the 865 agricultural employment-dependent counties, 81 percent relied on farm production for 50 percent or more of their agricultural jobs.

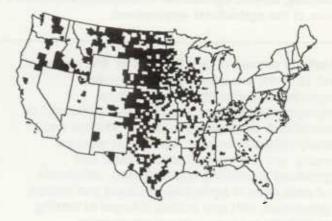
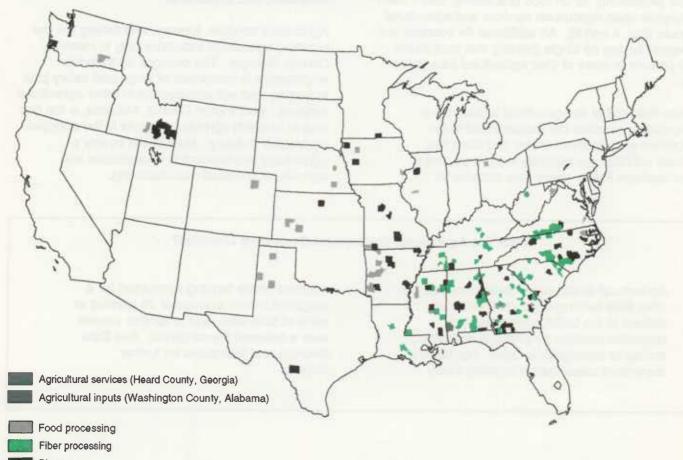


Figure 5

Other agricultural employment-dependent counties, 1989

Of the 865 agricultural employment-dependent counties, 19 percent relied on industries related to farming for 50 percent or more of their agricultural jobs.



Diverse

Table 3--Agricultural employment-dependent counties by principal farm-related industry and region, 1989

The Northern Plains had the most agricultural employment-dependent counties, nearly all of which relied on farm production for jobs.

Region		Principal industry ¹						
	Total	Farm production	Agricultural services	Agricultural inputs	Food processing	Fiber processing	Diverse	
		Number of counties						
United States	865	702	1	1	32	65	64	
Appalachia	139	93	0	0	4	27	15	
Corn Belt	127	115	0	0	5	0	7	
Delta States	59	25	0	1	3	17	13	
Lake States	39	38	0	0	0	0	1	
Mountain	73	68	0	0	2	0	3	
Northeast	1	0	0	0	0	0	1	
Northern Plains	204	198	0	0	5	0	1	
Pacific	18	16	0	0	1	0	1	
Southeast	92	41	1	0	9	21	20	
Southern Plains	113	108	0	0	3	0	2	

¹Industries that account for 50 percent or more of the jobs in agricultural employment-dependent counties. Diverse counties are those that have 25 percent or more of their employment in agriculture but have no principal farm-related industry.

Appendix

Data Sources and Definitions

Estimates in this report are based on the 1989 County Business Patterns file released by the Bureau of the Census, U.S. Department of Commerce, and subsequently enhanced to account for confidential data not published by the Bureau. The County Business Patterns data provide estimates for wage and salary jobs in most industries in the United States. Data on farm proprietors and wage and salary jobs in farm production, as well as nonfarm proprietors, government employment, and railroad workers, are not included in the County Business Patterns. Employment for these excluded aroups were obtained from the Bureau of Economic Analysis. U.S. Department of Commerce. Employment data on nonfarm proprietors, available only for major industrial divisions (one-digit Standard Industrial Classification (SIC) level), were distributed among farm-related industries (two-, three-, and four-digit SIC levels) based on the proprietor's share of total employment in the division in which the farm-related industry is classified. The percentage of proprietor employment in every industrial division was determined for each county. These percentages were applied to wage and salary employment in farm-related industries in the county.

Farm and farm-related industries are identified as industries having 50 percent or more of their

national work force employed in providing goods and services necessary to satisfy the domestic final demand for agricultural products. These industries are classified by location in metro and nonmetro counties as defined by the Office of Management and Budget's Metropolitan Statistical Area designation in 1984. Industries are aggregated into related groups, classified as: farm production; agricultural services, forestry, and fishing; agricultural input industries; agricultural processing and marketing industries; wholesale and retail trade of agricultural products; and indirect agribusiness (app. table 1).

Agricultural employment-dependent counties are those counties with 25 percent or more of their total employment in farm production; agricultural services, forestry, and fishing; agricultural inputs; and agricultural processing and marketing (termed agricultural employment). Employment in wholesale and retail trade of agricultural products and indirect agribusiness is excluded in that these industries have weak linkages to farm production. Agricultural employment-dependent counties are further classified by principal agricultural base. or that economic activity which accounts for 50 percent or more of all agricultural employment in the county. Counties are classified as farm production-. agricultural service-, agricultural input-, food processing-, or fiber processing-dependent. Diverse counties are those agricultural employmentdependent counties in which no activity contributes 50 percent or more of all agricultural employment.

Appendix table 1--Classification of farm and farm-related Industries

Industry groups and components	1987 Standard Industrial Classification (SIC) ¹		
Farming:			
Farm production (farm proprietors, and wage and salary farmworkers)	†		
Closely related industries:			
Agricultural services, forestry, and fishing	07-09		
Agricultural input industries			
Chemical and fertilizer mining	147		
Agricultural chemicals	287		
Farm machinery and equipment	3523		
Farm supply and machinery (wholesale trade)	5083, 5191		
Commodity contract brokers and dealers	622		
Agricultural processing and marketing			
Meat products	201		
Dairy products	202		
Canned, frozen, and preserved			
fruits and vegetables	203		
Grain mill products	204		
Bakery products	205		
Sugar and confectionery products	206		
Fats and oils products	207		
Beverages	208		
Miscellaneous food preparations			
and kindred products	209		
Tobacco products	21		
Apparel and textiles	221, 223-5, 2261, 2269,		
	228, 2298-9, 231-8, 2397		
Leather products	31		
Farm-related raw materials (wholesale trade)	515		
Warehousing	4221, 4222		
Peripherally related industries:			
Wholesale and retail trade of agricultural products			
Wholesale trade	513-4, 518, 5194		
Retail trade	54, 56, 58		
Indirect agribusiness			
Prefabricated metal buildings	3448		
Pumps and pumping equipment	3561		
Miscellaneous repair shops	7692, 7699		
Miscellaneous textile products	2295, 2393, 2395		
Containers, paper products,	2441, 2449, 262-3,		
and pulpwood products	2652-3, 2655-7, 2671-6,		
	3221, 3262, 3274		
Chemicals	2823-4, 2893		
Primary and fabricated metal products	3315-7, 334, 3411,		
	3466, 3497		
Food products machinery	3556		
Miscellaneous manufacturing	3965, 3993		
Printing and publishing	271-2, 274, 2752, 2754,		
	2759, 2791, 2796		

¹The Standard Industrial Classification (SIC) was revised in 1987. The revision resulted in mergers of some industries and creation of others through subdividing or restructuring existing industries.

[†]Note: Data were obtained from the Bureau of Economic Analysis, U.S. Department of Commerce, because County Business Patterns data do not include information about the employment of farmers or wage and salary jobs in agricultural production (SIC 01-02).

State	Total farm and farm-related industries ¹	Farm production	Agricultural services	Agricultural inputs	Agricultural processing and marketing	Wholesale and retail trade	Indirect agri- business	
	Percentage of total employment							
United States	17.3	2.4	0.6	0.3	2.4	9.7	1.9	
Alabama	21.1	3.2	.5	.4	5.9	9.1	2.1	
Alaska	18.1	.3	6.7	.1	1.6	8.7	.8	
Arizona	14.6	1.1	.9	.2	.7	10.7	1.1	
Arkansas	23.6	5.9	.8	.6	5.1	8.8	2.4	
California	15.8	1.7	1.0	.2	1.9	9.5	1.6	
Colorado	15.7	2.3	.5	.2	1.5	9.7	1.5	
Connecticut	13.0	.4	.6	.1	.9	8.8	2.2	
Delaware	15.0	1.3	.4	.2	2.4	8.8	2.0	
Florida	17.2	1.5	1.0	.3	1.3	11.7	1.4	
Georgia	19.6	2.1	.6	.3	4.8	9.8	2.0	
Hawaii	17.7	2.1	.5	.1	2.2	12.1	.7	
Idaho	24.8	7.2	.8	1.5	3.9	9.9	1.5	
Illinois	16.6	1.8	.4	.6	1.7	9.4	2.7	
Indiana	17.5	3.1	.5	.4	1.6	9.9	2.0	
lowa	27.2	8.7	.7	1.9	3.9	9.9	2.0	
Kansas	20.7	6.0	.6	.9	2.8	9.0	1.5	
Kentucky	22.8	7.0	.5	.3	3.4	9.9	1.7	
Louisiana	17.5	2.6	.5	.5	1.8	10.5	1.6	
Maine	20.8	1.8	1.4	.1	3.7	10.3	3.6	
Maryland	14.2	.9	.7	.1	1.3	9.5	1.7	
Massachusetts	14.1	.3	.6	.1	1.5	9.8	2.0	
Michigan	15.5	1.7	.4	.2	1.0	10.5	1.7	
Minnesota	19.3	4.6	.4	.6	2.0	9.2	2.5	
Mississippi	22.3	5.0	.6	.6	5.5	9.0	1.6	
Missouri	18.9	4.5	.5	.5	2.5	9.1	1.8	
Montana	21.8	7.6	.8	.8	1.0	10.5	1.2	
Nebraska	25.0	7.7	.6	1.5	3.8	9.8	1.7	
Nevada	11.8	.7	.6	.1	.3	9.2	.9	
New Hampshire	15.3	.7	.6	.1	1.5	10.4	2.1	
New Jersey	14.3	.3	.5	.1	1.9	9.2	2.3	
New Mexico	15.6	2.7	.4	.5	.9	10.4	.7	
New York	14.4	.7	.4	.1	2.0	9.1	2.2	
North Carolina	23.1	2.6	.6	.3	8.3	9.3	2.0	
North Dakota	26.4	11.9	.4	1.3	2.3	9.5	1.0	
Ohio	16.4	2.0	.5	.3	1.3	10.2	2.3	
Oklahoma	18.5	5.1	.5	.3	1.6	9.4	1.6	
Oregon	19.5	4.0	1.3	.4	1.6	10.3	1.8	
Pennsylvania	17.3	1.3	.5	.2	3.1	9.9	2.3	
Rhode Island	15.4	.2	.6	.1	2.0	10.2	2.3	
South Carolina	20.2	2.1	.6	.2	5.3	9.7	2.4	

Appendix table 2--Share of total State employment by farm and farm-related industry, 1989

Farm and farm-related industries provided over 25 percent of all jobs in Iowa, North Dakota, and South Dakota.

See footnote at end of table.

State	Total farm and farm-related industries ¹	Farm production	Agricultural services	Agricultural inputs	Agricultural processing and marketing	Wholesale and retail trade	Indirect agri- business	
	Percentage of total employment							
South Dakota	26.7	11.4	0.6	0.9	3.0	9.5	1.3	
Tennessee	21.7	4.3	.4	.3	4.7	9.6	2.3	
Texas	16.4	2.5	.5	.3	1.8	9.9	1.5	
Utah	15.3	2.2	.3	.3	1.8	9.3	1.3	
Vermont	18.3	3.1	.7	.2	1.5	10.6	2.1	
Virginia	16.6	1.8	.6	.2	3.1	8.9	2.1	
Washington	18.1	3.1	1.3	.3	1.6	10.1	1.7	
West Virginia	17.0	3.3	.4	.3	1.4	10.1	1.4	
Wisconsin	22.0	4.3	.5	.7	2.6	10.3	3.6	
Wyoming	18.2	5.1	.5	1.5	.6	9.5	1.1	

Appendix table 2--Share of total State employment by farm and farm-related industry, 1989--Continued

¹Percentages may not add to total because of rounding.

Appendix figure 1 U.S. farm production regions



For More Information...

contact T. Alexander Majchrowicz (202/219-0525), room 328, Agriculture and Rural Economy Division, Economic Research Service, U.S. Department of Agriculture, 1301 New York Avenue, NW., Washington, DC 20005-4788.

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