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# Agriculture Still Key to Economic Health of the Rural Great Plains

*The nonmetro population of the Great Plains has declined 16.2 percent since 1930. Job losses in agriculture and boom-bust cycles in the energy sector have contributed to this decline. Although farm numbers are declining, the Plains still produce a large portion of the Nation's agricultural products. The future ability of the nonmetro Great Plains to retain population depends on its ability to attract new industries to diversify the economic base and on the viability of its farming and energy sectors.*

To some, the Great Plains appear as a vast, flat, sparsely settled area that contributes little to the Nation's general economy. Some have even concluded that transferring rural areas of the Plains to public ownership and restoring them to a natural prairie would have minimal effect on the national economy. Such a view overlooks the overall contributions of the Plains, especially to the Nation's agricultural performance.

The 396 counties of the Great Plains are home to nearly 7 million people and provide about 3.4 million jobs. The Plains contain more than 10 percent of all U.S. farms and over 32 percent of all U.S. farmland. Plains farms account for more than 17 percent of total U.S. farm sales, including half of all wheat sales. Agriculture in the Plains is highly diverse, producing primarily cattle, wheat, corn, and cotton.

The agricultural orientation of many rural Plains communities presents unique challenges to community leaders striving to keep their towns viable.

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Judith Sommer, Fred Hines, and Mindy Petrulis are economists in the Agriculture and Rural Economy Division, ERS.

Changes in two sectors, farming and energy, have induced dramatic economic and social adjustments since settlement began in the 19th century (see "Early Settlement..." box for details). The future of the Great Plains depends largely on its ability to add other industries to its economic base. But performance of the Plains' two traditional sectors will have a major effect on economic well-being.

Some communities may turn to activities that build on the farm sector by adding value to farm products. Others may identify more closely with the region's metro areas, which are diversifying their economic base more in line with national trends and are enjoying population and employment growth.

## Nonmetro Population Losses Offset by Metro Gains

In 1990, about 3.5 million people lived in the nonmetro Plains, a decrease of 170,000 during one decade. Other parts of the Nation shared the Great Plains' population retention problem in the 1980's. Population losses were the dominant trend in much of the Corn Belt, the Mississippi Delta, and northern Appalachia, although the total U.S. population increased nearly 10 percent.

Population loss in the nonmetro Plains is not a new phenomenon; rather, it is the continuation of a long-term trend. Population peaked in 1930 in 233 nonmetro Plains counties, nearly two-thirds of all Plains counties. Since then, nonmetro Plains counties have lost more than 600,000 people, a decline of 16.2 percent.

Except for the 1970's, nonmetro areas of the Plains have lost population in every decade since 1930. A nonmetro population growth spurt in the

1970's was followed by a return to widespread population loss in the 1980's. More than 80 percent of Great Plains counties lost population during the 1980's with 21 counties losing more than 20 percent of their population.

Nevertheless, 26 of the 44 Plains counties that reached peak population in 1990 are nonmetro, showing that there are still a few viable growth areas outside the Plains' major cities. Nonmetro counties exhibit high growth rates for a variety of reasons, many of which are region-specific. For example, nonmetro counties with energy resources have benefited from increased demand for western coal. Areas such as southwestern Kansas are experiencing growth fueled by irrigated farming, cattle-feeding, and meat-processing activities. Recent growth in the nonmetro counties of western South Dakota and eastern New Mexico is based on increased demand in the tourism and retirement sectors.

Although the population growth rate in the Great Plains has fluctuated widely since 1930, the 1930's is the only decade in which the Plains as a whole lost population, because metro population gains in other decades were sufficient to offset nonmetro losses (fig. 1). Metro counties generally have experienced high growth because they have the benefit of transportation, communications, and financial links to the rest of the national economy, and because they have captured a share of the growth in the service industries related to retirement and tourism.

During the 1940's and 1950's, metro population in the Plains increased rapidly, while nonmetro losses were minimal. Both nonmetro and metro areas of the Plains gained population in the 1970's, but the 1980's were again a

period of nonmetro decline, offsetting half of metro gains.

The underlying economic force behind population loss in the nonmetro Great Plains is loss of employment opportunities caused by structural change in the farm sector and boom-bust cycles in the energy sector. In counties where farming is important, a declining population reflects the long-term trend of job losses in the agricultural sector and the lack of replacement jobs in other industries (mining, manufacturing, services). Job losses in the farm sector were caused primarily by technological change, especially the movement toward capital-intensive

production and the introduction of irrigation. Likewise, population trends in mining areas illustrate the boom-bust cycle of high energy prices bringing more jobs, income, and population, only to be followed by falling prices and local economic bust.

### Agriculture and Natural Resources Critical to Nonmetro Great Plains Employment

In comparing the structure of employment in the nonmetro Plains with that of the nonmetro United States, the agriculture and energy sectors stand out as important differences. In 1988, 15.5 percent of employment in the

nonmetro Great Plains was in farm production, half again as much as the 9.6 percent for the nonmetro United States (table 1). The mining sector in the nonmetro Plains accounted for 3.5 percent of the employment, more than double the figure for the nonmetro United States. The nonfarm manufacturing sector, on the other hand, accounted for only 3.6 percent of the employment in the nonmetro Plains, compared with 11.3 percent for the nonmetro United States.

Farm input industries and the processing and marketing of agricultural products contributed another 5.1 percent to employment in the nonmetro Plains

### Early Settlement of the Great Plains

The Great Plains were settled in the late 19th to early 20th century. Early migrants saw a nearly level, treeless, semiarid land, extending west from the 98th meridian up to the Rocky Mountains. The eastern boundary is generally viewed as the line delineating the mixed-grass prairies of the Plains from the tall-grass true prairies to the east; the western boundary is distinct, bordering the Rocky Mountains. The Great Plains region covers 396 counties in 10 States.

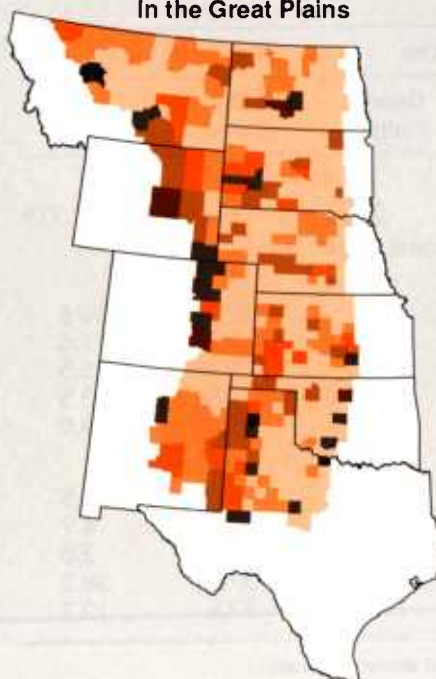
Early settlers of the region included Anglo-American cotton farmers from the Southeast, Russian-German immigrants who planned to grow wheat in the new land, farmers from the Corn Belt States who were looking for more land, and European immigrants from Norway, Sweden, and Germany. These settlers strove to establish farming operations that could provide for the well-being of their families. But, for many, their assets and resources were too limited to attain long-term prosperity. Farms were too small and the settlers used farming methods that were successful in other regions but were unsuitable for the harsh and arid environment of the Plains. Typically, the Great Plains area receives less than 20 inches of rainfall a year.

Early enthusiasm for land acquisition in the Plains led to a farm-based population larger than farming activities could support. Many Plains counties reached their maximum population soon after initial settlement, and since then their economic history has been marked by population losses and the problems associated with population decline. Population loss has caused labor shortages in some industries and in some areas has led to a population base too small to support the deliv-

ery of public and private services (education, medical, police).

Western Oklahoma illustrates this trend of early population buildup and long-term decline. In 1990, 20 of the 28 Oklahoma Plains counties had less population than in 1910—3 years after statehood, less than 10 years after the land lotteries that helped settle counties in southwest Oklahoma, and less than 20 years after the land rush that settled the northern counties within the Cherokee strip. Fifteen of these counties have lost population during virtually every decade since 1930. The only exception was the 1970's, when the national energy crisis created population boomlets in areas with undeveloped energy resources. However, these boomlets, which brought prosperity and an array of new services, did not last very long. As the energy crisis waned and the oil industry contracted, newly created jobs disappeared, and population declined again.

Census year of maximum population for metro and nonmetro counties in the Great Plains

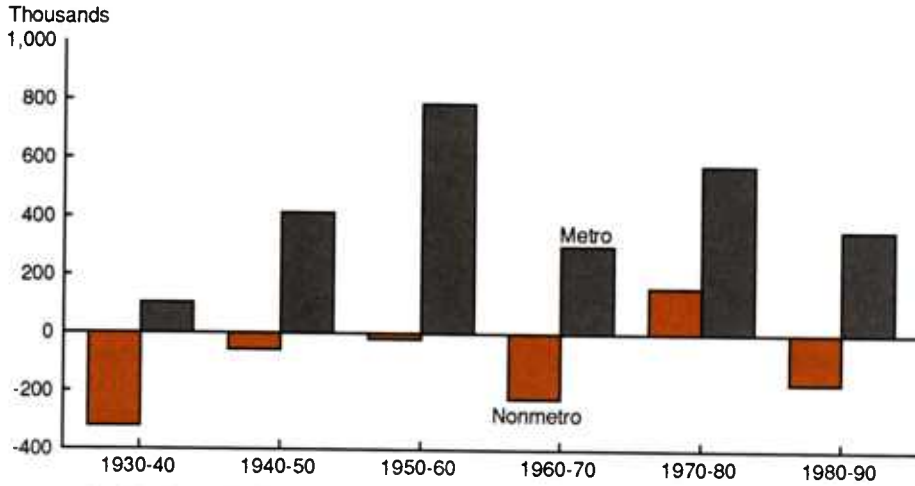


	Metro	Nonmetro
1990	Black square	Red square
1980	Dark brown square	Dark orange square
1940-70	Black square	Orange square
1930	N.A.	Light orange square

Figure 1

**Population change in the Great Plains, 1930-90**

*Metro gains exceeded nonmetro losses in all decades except the 1930's.*



Source: Census of Population.

and 5.8 percent in the nonmetro United States. The Plains figure is relatively small for a farm-dependent region because the dominant crop in the Plains, wheat, requires little local processing before shipment. Thus, only 22 processing and marketing jobs are needed per 100 farm production jobs in the nonmetro Plains, compared with 51 processing and marketing jobs per 100 farm production jobs in the nonmetro United States.

Employment growth in these basic sectors during 1975-88 was lower in the Plains than in the U.S. economy and varied significantly within the Plains (see box, "Great Plains Agriculture..."). During this period, basic employment in the nonmetro Plains fell by 61,000 jobs, while U.S. nonmetro employment in basic industries increased by 461,000 jobs. This helps explain the much higher overall employment growth rate (29.9 percent)

**Table 1—Structure of employment in the United States and Great Plains, 1988**

*Farm production accounted for a much larger proportion of jobs in the Great Plains than in the Nation as a whole.*

Employment by industry	All counties		Nonmetro counties	
	United States	Great Plains	United States	Great Plains
	<i>Thousands</i>			
Total employment	127,943	3,391	24,605	1,719
	<i>Percent of total employment</i>			
Farm and farm-related industries <sup>1</sup>	17.9	23.0	27.2	30.5
Farm inputs	0.3	0.9	0.9	1.6
Farm production	3.2	8.8	9.6	15.5
Processing and marketing	2.5	2.4	4.9	3.5
Wholesale and retail trade	9.8	9.6	9.8	9.0
Nonfarm industries				
Mining	0.8	3.4	1.5	3.5
Construction	5.2	4.9	5.0	4.7
Manufacturing	11.2	6.1	11.3	3.6
Service-producing	49.1	43.4	37.2	38.0
Government	15.9	19.3	17.8	19.7

<sup>1</sup>Includes employment in indirect agribusiness not shown in detail.

Source: County Business Patterns, 1988.

in nonmetro America than in the nonmetro Plains (11.9 percent).

In less than 15 years, the nonmetro Plains lost 89,000 jobs in farm input industries and farm production. Only 10 percent of those losses were offset by job gains in nonfarm manufacturing. That contrasts with the national picture where 498,000 nonmetro jobs lost in the farm input and farm production sectors were more than offset by gains in nonfarm manufacturing of 517,000 jobs.

Besides a faster decline in farm production and farm input industries than in all nonmetro counties, the nonmetro Plains also experienced slower growth in farm-related wholesale and retail trade than did all nonmetro counties. On the brighter side, employment in farm processing and marketing industries in the nonmetro Plains grew by 10.8 percent, largely because of expansion in meatpacking facilities. Although the growth rate in this sector was more than triple the overall nonmetro rate, the small increase in processing and marketing employment (6,000 jobs) did little to offset the decline in farm production employment (about 80,000 jobs).

Employment gains in service-producing industries in the nonmetro Plains, however, more than offset farm and farm-related job losses and accounted for almost all of the net increase in total employment. Nationwide, the service-producing industries accounted for less than two-thirds of the job growth in nonmetro areas. Many jobs in the service industries, however, require lower skill levels and offer fewer rewards in terms of job satisfaction and pay. Moreover, for the more farm-dependent regions, the ability to replace farm and farm-related jobs even with such nonfarm service jobs was weak.

**Consolidation Reduces Farm Numbers, Increases Farm Size**

The continued consolidation in the U.S. farm sector has meant fewer and larger farms and fewer jobs in farm production. During the past 20 years, the Plains lost about 50,000 farms. In many rural Plains counties, these farm jobs and their associated incomes have not been replaced with jobs in other basic industries. Unlike many areas in other parts of the country,

**Table 2—Employment change in the United States and Great Plains, 1975-88**

*Farm processing and marketing jobs increased faster in the nonmetro Plains than in all nonmetro areas, but growth in that small sector did little to offset much larger decreases in farm production jobs.*

Employment by industry	All counties		Nonmetro counties			
	United States	Great Plains	United States		Great Plains	
	-----Percent-----		Percent	1,000	Percent	1,000
Total employment	41.0	26.2	29.9	5,659	11.9	183
Farm and farm-related industries <sup>1</sup>	26.5	2.7	9.2	561	-8.5	-49
Farm inputs	-23.9	-25.3	-21.8	-59	-23.9	-9
Farm production	-5.9	-21.6	-15.6	-439	-23.2	-80
Processing and marketing	-9.3	1.8	3.3	39	10.8	6
Wholesale and retail trade	65.5	45.8	61.1	910	28.6	34
Nonfarm industries						
Mining	30.0	23.1	-11.6	-50	-3.5	-2
Construction	58.3	17.7	59.0	453	22.4	15
Manufacturing	7.9	26.2	22.7	517	16.8	9
Service-producing	71.1	56.5	65.5	3,622	38.3	181
Government	14.4	10.6	14.5	556	9.5	29

<sup>1</sup>Includes employment in indirect agribusiness not shown in detail.

Source: County Business Patterns, 1975-88.

**Table 3—Importance of Great Plains agriculture, 1987**

*The Plains contain 10 percent of all U.S. farms, but account for 17 percent of total farm sales.*

Item	Great Plains as percent of United States
	Percent
Total farms	10.2
Land in farms	32.2
Cropland	27.8
Acres per farm	314.1
Total farm sales	17.3
Sales per farm	169.3
Sales per acre	53.9
Total farm sales of:	
Sorghum	39.9
Corn	13.2
Wheat	50.7
Cotton	22.3
Cattle	41.9
Fed cattle	49.8
Government payments	25.3
All farms receiving government payments	18.8
Average government payment per participating farm	134.3

Source: Census of Agriculture, 1987.

particularly in the Southeast where job losses in the farm and farm-related industries were replaced by gains in manufacturing, a majority of Plains counties were not able to switch from a predominant farm base to one dependent on manufacturing. Instead, through the decades, these local economies continued to rely on a farming sector made up of fewer farms with lower labor requirements, while a larger share of services was purchased from outside the county.

Cottle County, TX, illustrates the long-term effects of a decline in farm employment on a rural county's economy. In 1930, Cottle County had 9,395 people and 1,047 farms. By the late 1980's, the county's population had dropped to less than one-fourth of its 1930 level. Also, the number of farms had declined to 222, while average farm size had increased from 188 acres to 2,252.

#### **Great Plains Produce a Major Portion of U.S. Farm Output**

Although the number of farms and farm employment have been declining, the Plains still contain 10 percent of all U.S. farms and 32 percent of U.S. farmland (table 3). These farms produce half of the total U.S. wheat crop, 40 percent of the Nation's sorghum, over 40 percent of all cattle,

and 50 percent of fed cattle. The average acreage (1,451 acres) of Plains farms is over three times the national average. Sales per farm average over \$110,000, about 70 percent above the U.S. average. But, sales per acre are roughly half the U.S. figure, indicating the relatively low overall intensiveness of Great Plains farming, despite the high intensity of feedlot operations and irrigated farming in many areas.

Cattle and wheat are the dominant farm commodities in the Great Plains, accounting for almost three-fourths of total farm sales. Cattle sales and wheat sales account for 64 percent and 10 percent of total sales, respectively. Comparable figures for the United States are 26 percent and 4 percent. Although corn and cotton are less important overall, they dominate farm production in some parts of the region (see box, "Farm Products..."). Plains counties have become increasingly important to the U.S. fed cattle market as feedlots and meat-processing activities have grown in the Plains in recent years. Today, fed cattle (cattle fattened on grain and concentrate) account for 39 percent of all farm sales in the Plains, compared with 14 percent for the Nation as a whole.

Government payments are also important to Plains farms because a large part of the region's production is Fed-

## Great Plains Agriculture Characterized by Regional Diversity

Although we present information about the Great Plains as if it were a single homogeneous entity, in fact there is great variation. Farming in the Plains illustrates the region's diversity. We used cluster analysis to divide the Plains counties into five multicounty groups based on farming characteristics. See *Diversity in U.S. Agriculture* (in "For Additional Reading...") for a detailed description of this process. These multicounty groups represent five major types of farm production: (1) range (nonfed) cattle, (2) fed cattle, (3) wheat and cattle, (4) cotton, and (5) fed cattle and corn. Because some parts of the five multicounty groups are spatially separated, we discuss nine distinct subregions. For example, the multicounty group characterized as wheat and cattle production is actually

made up of a spring wheat-cattle area in the northern Plains and a winter wheat-cattle area in the central Plains.

### Farm Production Employment Dropped in Every Subregion

Employment in farm production and the farm input industries is far more important in the "fed-cattle, corn" (20 percent) and "spring wheat, cattle" (19.1 percent) subregions than in the Plains overall (9.7 percent). These two subregions form a band that runs across northern Montana and much of North Dakota, then south through central South Dakota and Nebraska.

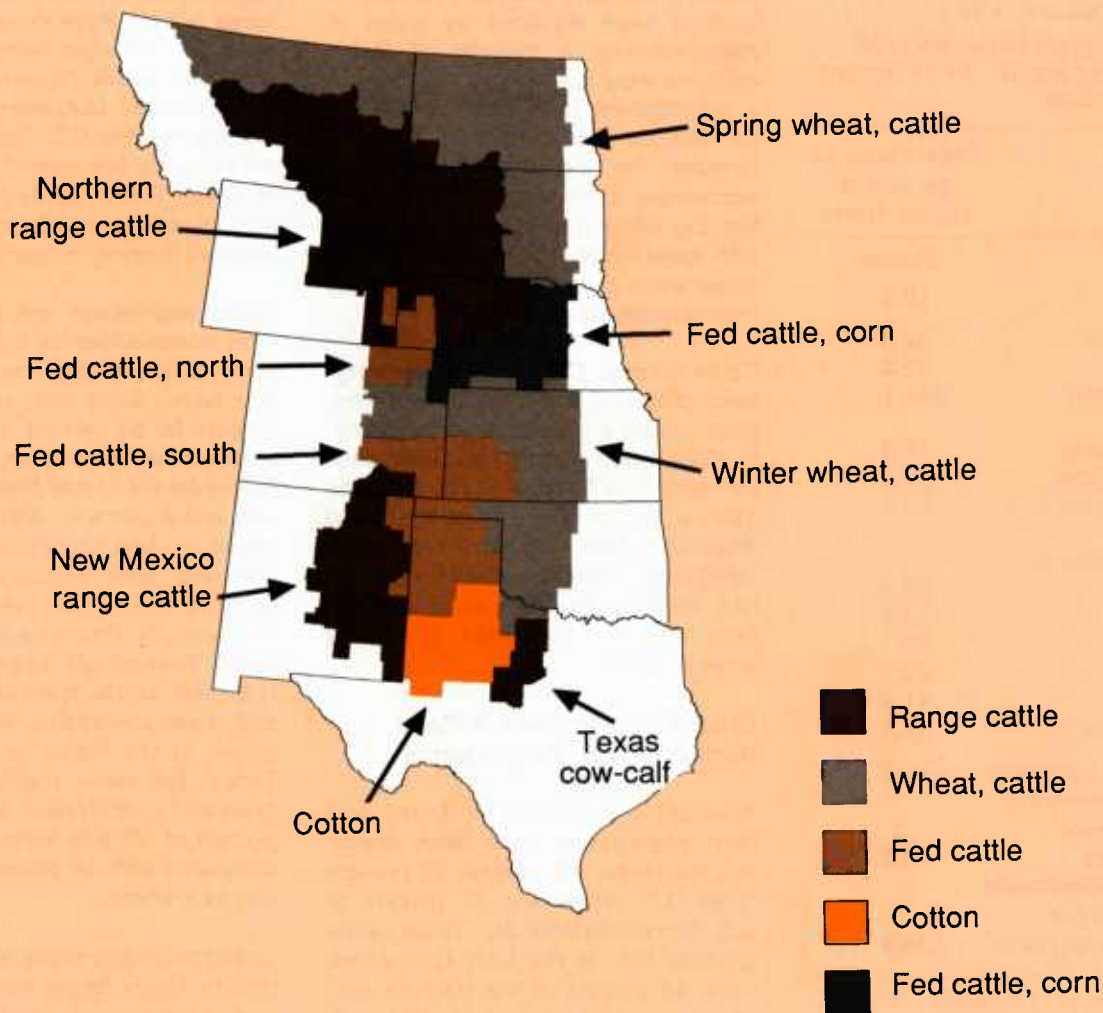
Farm production and the farm input industries are also important in the

"northern-fed cattle" and "southern-fed cattle" subregions. In all three fed-cattle subregions, farm and farm-related employment is boosted by jobs in the processing and marketing of farm products, because packing plants typically locate close to cattle-feeding operations.

Mining was relatively more important than farm production in the "Texas cow-calf" (9 percent compared with 7.6 percent of total employment) and "cotton" (8.4 compared with 6.1 percent) subregions. In the "winter wheat, cattle" subregion, manufacturing employment (9.4 percent) exceeded farm production (5.9 percent).

In general, total employment growth was lower in the more farm-depend-

Farm production subregions of the Great Plains



ent subregions. In three of the four most farm-dependent subregions, employment growth was about 13 percent, compared with 26 percent for the Plains overall. In these subregions, changes in farm and farm-related employment ranged from 0.8 to -7.7 percent.

The subregions with the highest farm-related employment growth were "New Mexico range cattle" (18.4 per-

cent), which includes the Santa Fe metro area, and "winter wheat, cattle" (10.8 percent), which includes significant metro areas in Kansas and Oklahoma. Both subregions had substantial increases in farm-related employment because of high growth in the locally important farm wholesale and retail trade sectors.

The share of employment in farm production declined in all subregions,

and the share of employment in farm inputs declined in all subregions except "Texas cow-calf." Employment in industries that process and market agricultural products also declined in all subregions except for the three fed-cattle subregions.

### Employment structure in Great Plains subregions

Employment by industry	Northern range cattle	NM range cattle	Texas cow-calf	Winter wheat, cattle	Spring wheat, cattle	Southern fed cattle	Northern fed cattle	Cotton	Fed cattle, com
<i>Thousands</i>									
<b>Total employment, 1988</b>	373.1	135.9	109.5	1,417.5	352.3	372.3	123.1	336.7	170.4
<i>Percent of total employment</i>									
Farm and farm-related industries <sup>1</sup>	21.6	20.0	20.3	18.6	31.6	29.2	30.2	19.8	35.4
Farm inputs	.6	.2	.4	.7	1.6	1.4	1.8	.7	2.5
Farm production	8.8	6.1	7.6	5.9	17.5	10.3	12.5	6.1	17.5
Processing and marketing	1.1	1.2	2.4	1.6	2.4	6.6	5.6	1.4	4.2
Wholesale and retail trade	10.2	11.6	8.7	9.2	9.2	9.8	9.3	10.3	9.7
Nonfarm industries:									
Mining	3.2	4.1	9.0	3.1	1.3	2.9	1.2	8.4	0.2
Construction	4.8	5.2	6.2	4.9	3.7	5.0	6.0	5.6	4.4
Manufacturing	2.6	3.1	4.9	9.4	2.5	3.9	5.9	4.1	4.9
Service-producing	45.2	44.9	40.6	44.7	41.6	40.4	41.1	44.2	38.5
Government	22.6	22.7	19.0	19.2	19.2	18.4	15.7	17.9	16.6
<i>Thousands</i>									
<b>Employment change, 1975-88</b>	76.4	36.6	18.8	399.3	40.2	42.2	22.5	48.1	20.1
<i>Percent change</i>									
Total employment	25.8	36.8	20.8	39.2	12.9	12.8	22.4	16.7	13.4
Farm and farm-related industries <sup>1</sup>	7.2	18.4	-5.7	10.8	-7.7	-.8	.8	-4.2	-.9
Farm inputs	-16.3	-21.9	2.1	-27.5	-23.5	-29.3	-30.5	-25.7	-20.3
Farm production	-14.9	-15.9	-23.5	-18.4	-20.3	-31.1	-14.8	-38.2	-14.9
Processing and marketing	-23.7	-36.1	-34.0	-15.6	-3.1	66.9	13.6	-33.7	18.6
Wholesale and retail trade	46.1	73.5	36.4	56.0	29.7	27.6	29.0	53.7	33.8
Nonfarm industries:									
Mining	26.3	-21.4	86.8	70.6	81.7	35.8	-49.1	-16.1	4.5
Construction	26.8	30.2	21.4	21.8	20.8	3.1	29.5	7.0	3.0
Manufacturing	14.5	84.4	-17.8	37.9	103.2	-19.8	53.0	-5.9	21.7
Service-producing	48.6	72.9	42.2	77.2	39.8	31.6	55.5	48.1	33.7
Government	11.0	17.5	13.1	12.4	-1.6	11.6	7.4	14.6	9.3

<sup>1</sup>Includes employment in indirect agribusiness not shown in detail.

Source: County Business Patterns, 1975-88.

**Table 4 –Age, education, and income in the United States and Great Plains**

*Working-age adults (18-64) are a smaller share of the population in nonmetro areas of both the United States and the Plains than in metro areas.*

Item	United States			Great Plains		
	Total	Metro	Nonmetro	Total	Metro	Nonmetro
<i>Percent</i>						
<b>Age distribution, 1980:</b>						
Under 18 years	28.2	27.7	29.5	29.7	29.5	29.8
18-64 years	60.5	61.6	57.5	58.9	62.4	56.3
65 years and over	11.3	10.7	13.0	11.4	8.1	13.9
<b>Educational attainment, 1980:</b>						
School dropout rate <sup>1</sup>	11.6	11.1	13.1	12.3	13.1	11.7
High school completion rate <sup>2</sup>	66.5	68.9	58.7	69.0	74.4	65.1
<b>Income measures, 1988:<sup>3</sup></b>						
Transfer payments as share of total personal income <sup>4</sup>	14.4	13.5	18.8	15.2	13.5	16.8
<i>Dollars</i>						
Per capita income	16,484	17,618	12,647	14,301	15,089	13,603
Average annual wage and salary income per employee	21,386	22,444	16,434	17,621	19,553	15,574

<sup>1</sup>Persons 16-17 years old not enrolled in school.

<sup>2</sup>Persons 25 years or older who completed high school or more.

<sup>3</sup>Income measures for the United States exclude Alaska and Hawaii.

<sup>4</sup>Transfer payments include Social Security, Medicare, Medicaid, Supplemental Security Income, Aid to Families with Dependent Children, and other government retirement and assistance programs.

Source: Census of Population, 1980, and Local Area Personal Income Estimates, Bureau of Economic Analysis, 1988.

eral program crops, such as wheat, cotton, and to a lesser extent, feed grains. In 1987, about a fourth of all government farm payments went to Great Plains operators, whose average government payment (\$18,500) was a third higher than the U.S. average.

### **Age and Education in Rural Areas Linked to Job Quality**

Since the agriculture and energy industries are not likely to be sources of consistent employment growth in coming decades, how are the nonmetro Plains positioned to diversify their economy by attracting or creating jobs in other industries? Two indicators of the suitability of the nonmetro Plains workforce for jobs in other industries are age and education.

In 1980, the Plains had a slightly higher share of people under 18 years (29.7 percent compared with 28.2 nationwide), mainly children dependent on parents' income (table 4). The Plains had a slightly lower share of people in the 18-64 age category (58.9 percent compared with 60.5), the primary group that earns income from jobs. The share of people in the

18-64 age group indicates the presence of wage earners in the area, those who provide income for themselves and their families, and, through the multiplier effect, jobs and income for others in the area.

In nonmetro areas of both the United States and the Plains, the share of population of working age (57.5 percent and 56.3 percent, respectively) is smaller than in metro areas (61.6 percent and 62.4 percent, respectively). This may be partly the result of workers migrating to urban areas to find higher paying jobs, particularly when the average annual income per wage and salary employee in metro areas is 25 percent higher than in nonmetro areas of the Plains.

The nonmetro share of population 65 years and over (13 percent for the United States and 13.9 percent for the Plains) is larger than the metro share (10.7 and 8.1 percent). These older residents generally require a disproportionate amount of social and medical services. Government transfer payments, primarily social security payments received by retired and disabled workers, are generally much

lower than average earnings and, therefore, have a smaller effect on the local economy. The share of income from transfer payments in nonmetro areas of the Plains is about a fourth higher than in Plains metro areas.

The economic vitality of rural communities depends also on the availability of a high-quality labor force. One indicator of a well-trained workforce is the level of educational attainment. Historically, educational attainment has been higher in most of the Great Plains than for the Nation as a whole. In 1980, 69 percent of the Plains adult population (age 25 years or over) had completed high school or more, compared with 66.5 percent of the adult population nationwide. This indicates that the region may not be disadvantaged when it comes to competing for footloose industries that need a more educated labor force.

However, within the Plains, the educational attainment rate for nonmetro areas lagged metro areas (65.1 percent completing at least high school, compared with 74.4 percent) despite the lower nonmetro school dropout rate. This seeming contradiction may be

## Farm Products and Characteristics Vary Across Subregions

Cattle production is significant in every Great Plains subregion. The "cotton" and "spring wheat, cattle" subregions have the smallest percentages of sales from cattle, but at about one-third of total farm sales, cattle sales still represent sizeable percentages. Average farm size in each of the Plains subregions exceeds the U.S. average. The largest farms in the Plains are located in the two subregions where range cattle dominate agricultural production. Although sales per farm in these subregions are near the U.S. average, sales per acre are the lowest in the Plains.

Average farm sales are highest in the three fed-cattle subregions. While farms here are large, they still have the highest sales per acre. These three subregions also have the largest shares of irrigated cropland. Irrigated farmland is used for feed production. About one-fourth of all farms in these subregions have sales of \$100,000 or more. These large farms account for more than 80 percent of farm sales in the three subregions.

### Farming characteristics of the United States and nine Great Plains subregions, 1987

Item	United States	Great Plains									
		Total	Northern range cattle	NM range cattle	Texas cow-calf	Winter wheat, cattle	Spring wheat, cattle	Southern fed cattle	Northern fed cattle	Cotton	Fed cattle, corn
<i>Number</i>											
Total counties	3,076	396	69	14	11	90	84	53	10	32	33
Nonmetro	2,365	375	66	14	10	82	82	50	9	29	33
Total farms (thousands)	2,087.8	213.7	24.1	6.2	6.9	57.7	50.4	21.9	8.7	12.6	22.7
Acres per farm	462	1,451	3,452	3,812	840	848	1,378	1,159	1,000	1,309	770
<i>Dollars</i>											
Sales per farm	65,165	110,305	79,053	64,621	44,013	69,331	62,345	349,208	212,456	91,008	110,305
Sales per acre	141	76	23	17	52	82	45	220	212	69	143
<i>Percent</i>											
Share of farm sales from:											
Corn	7.8	6.0	2.5	1.0	-	3.2	3.6	3.1	4.8	.3	25.3
Wheat	3.5	10.4	10.7	2.2	6.3	19.7	28.4	4.4	4.1	1.6	2.8
Cotton	3.1	4.0	-	3.5	6.3	2.8	-	2.2	-	54.6	-
Cattle	26.4	63.8	70.5	66.3	68.0	58.0	35.7	84.5	65.9	31.7	55.4
Fed cattle	13.5	38.7	13.1	0.8	19.3	19.4	8.1	69.6	56.1	13.1	40.6
Share of farmland as:											
Cropland	46.0	39.8	15.9	4.9	26.4	57.4	59.8	45.6	45.6	41.2	57.0
Irrigated land	4.8	4.3	1.5	1.3	.4	3.0	1.0	11.4	12.8	5.5	20.1
Share of farms with sales:											
Less than \$40,000	72.1	52.1	57.9	76.5	83.2	67.7	54.2	49.8	54.1	55.7	47.5
\$40,000-\$99,999	13.8	19.7	23.1	10.4	9.8	18.3	29.3	20.8	22.1	20.7	26.0
\$100,000 or more	14.2	16.7	19.0	13.0	7.0	13.9	16.5	29.5	23.8	23.6	26.6
Share of farms receiving government payments	33.5	61.6	39.3	20.8	30.0	65.7	72.5	66.7	52.8	64.7	67.7
<i>Dollars</i>											
Average payment per participating farm	13,800	18,536	16,003	17,570	8,577	14,489	17,152	28,125	15,997	23,530	24,267

- = less than 0.1 percent.

Source: Census of Agriculture, 1987.



The Great Plains account for half of all U.S. wheat sales.

Photo courtesy of National Rural Electric Cooperative Association

explained partly by nonmetro areas having a larger share of persons 65 and over, who are less likely to have finished high school, and partly by the outmigration of younger, better-educated people seeking higher paying jobs in the cities. Rural Plains areas will need to offer a supply of high-quality jobs, jobs that motivate people to improve their skills and reward them financially, if they are to keep a highly educated population.

### Prospects for the Future

The Great Plains economy was first built around farming and then supplemented by the development of energy-related industries. However, the downward trend in agricultural employment plus the capriciousness of energy sector performance led to a majority of Plains counties losing population each decade since the 1930's. Although most Plains counties now have substantially less population than 60 years ago, overall population is increasing because of substantial growth in metro population centers. Metro areas of the Plains have relatively new infrastructure, have strong recent growth records, and appear to be in a good position for future growth.

The future of the rural Great Plains depends largely on the region's ability to attract other industries to add to the current economic base. The structure of agriculture will continue to follow the national trend toward fewer and larger farms, but population and em-

ployment effects from consolidation will be small compared with past effects. The energy sector will continue to be subject to swings in global markets. But performance of these sectors remains a major determinant of economic well-being for rural Plains residents.

Plains farmers are subject to swings in supply and demand in international markets, as well as competition from domestic producers, because they are highly dependent on sales of wheat, a large part of which is exported. Many other factors beyond the farmer's control also affect the performance of the farm sector. For example, the performance of the fed-cattle subsector depends on the continued availability of irrigation water for feed production, as well as consumer acceptance of a product (red meat) that has recently been challenged by other meats (primarily poultry) in an age of low-fat diets. In like manner, cotton producers are subject to irrigation water availability, competition from foreign producers and manmade fibers, and a demand for cotton textiles that is influenced by swings in the business cycle.

The potential for new businesses in the Plains may well be greatest in agriculture-related industries that add value to basic farm products, such as meat processing, packaging, and marketing. Expansion in cattle-feeding operations offers growth potential to the complementary meatpacking industry. Although most grain produced in the Plains is exported from the region,

growth is possible in grain-processing activities. Added activities in wheat milling and processing, such as pasta production, are possibilities. However, nationally, employment growth in food-processing industries has not been strong.

Increased economic diversity is the greatest challenge for the Plains economy, particularly in nonmetro communities. The relatively high education level may be key to attaining such diversity. Education is one of the industrial location factors that may favor the Plains for manufacturing jobs and the new footloose industries, which offer routine, back-office clerical services through communications networks so that physical location is less important.

### For Additional Reading...

The Great Plains Agricultural Council, *Proceedings of the Great Plains Agricultural Council*, published annually, 1958 to present.

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