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Agricultural and Rural Economic and Social Indicators

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Agricultural and Rural Economic and Social Indicators

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Preface

Agricultural and Rural Economic and Social Indicators is a guide for those interested in the published economic and social indicators of the Economic Research Service (ERS), U.S. Department of Agriculture (USDA). The guide provides descriptions of the indicators, along with illustrative samples of available statistics. Readers will learn what is measured, when and where the information is published, whether the data are available in electronic form, and whom to contact for more details. When available, other publications on coverage, historical development, methods used, and data sources are noted.

We have included 30 indicators in the guide. ERS prepares or adds value to all of these indicators. Underlying data and series frequently come from other Federal agencies or from international organizations. We have attempted to identify the most important of these data sources.

The guide to ERS agricultural and rural economic and social indicators draws heavily, but not exclusively, on various published reports and other materials prepared by ERS staff. No single author is listed because the materials have been redrafted or modified significantly in many cases. Those who are identified as contact persons wrote much of the material from which the descriptions were abstracted.

Several ERS staff members assisted with typing and other clerical activities essential to production of this publication. Special thanks go to Gwen Matlock, Office of the Deputy Administrator for Information Resources and Management Operations, for preparing the final camera copy and to Judy Garza, Economics Mangement Staff, for editorial assistance.

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Abstract

This guide provides descriptions and illustrative samples of available statistics from the agricultural and rural economic and social indicators published by the Economic Research Service (ERS), U.S. Department of Agriculture. Users will learn what the statistics measure, when and where the information is published, whether the data are available in electronic form, and whom to contact for more information. The data come from various published reports and materials prepared by ERS staff. Underlying data and series frequently come from other Federal agencies or from international organizations.

Keywords: economic and social indicators, agricultural statistics

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Glossary

The following abbreviations appear in this publication.

AFIDA	Agricultural Foreign Investment Disclosure Act
BEA	Bureau of Economic Analysis
BLS	Bureau of Labor Statistics
CCC	Commodity Credit Corporation
CCES	Continuing Consumer Expenditure Survey
COP	Costs of Production
CPI	Consumer Price Index
CPS	Current Population Survey
ERS	Economic Research Service
FAO	Food and Agriculture Organization
FCRS	Farm Costs and Returns Survey
GDP	Gross Domestic Product
GNP	Gross National Product
IMF	International Monetary Fund
MSA	Metropolitan Statistical Areas
NASS	National Agricultural Statistics Service
TVA	Tennessee Valley Authority
UN	United Nations
USDA	United States Department of Agriculture
USDC	United States Department of Commerce
USDL	United States Department of Labor

Contents

Costs of Production

Cost-of-production estimates are available for major crop and livestock enterprises, both for the Nation and for major farm production regions.

The Economic Research Service (ERS) estimates costs of production (COP) for major crop and livestock enterprises. The data are compiled at regional and national levels. COP estimates are important in designing Federal farm policies and programs and for farm and other private sector management and planning activities.

Concepts, Methods, and Data

ERS prepares and presents COP estimates as commodity budgets that summarize operator and landlord costs. These cost and return statements are on a per-unit basis, such as 1 acre, 1 animal, or 1 hundredweight. They include value of production, or cash receipts, cash expenses, and economic (full-ownership) costs.

Analysts estimate value of production by multiplying price times yield plus any value of secondary products, such as straw or culled breeding livestock. In survey years, yields are reported by operators. In nonsurvey years, yields and prices are reported by the National Agricultural Statistics Service (NASS). Harvest-month prices are used for crops, except for sugar crops, which are valued at season-average prices. ERS cost and return estimates have traditionally excluded the direct effects of Government programs, but for certain commodities cost and return statements show the direct effects of participation in such programs. Cash costs include variable and fixed expenses. Variable expenses are those incurred during production, including such items as seed, fertilizer, chemicals, custom operations, hired labor, fuel and lubrication, repairs, drying, ginning, purchased irrigation water, feed, breeding, veterinary fees and medicines, and hauling. Fixed expenses include general farm overhead, taxes and insurance, and interest. General farm overhead and interest are allocated to the various commodities based on their value of production. When cost and return statements include the direct effects of Government programs, costs incurred for set-aside land are included.

Livestock forage costs include purchased and homegrown forage. ERS estimates the cost of homegrown forages using forage-production budgets; it values purchased forages at the purchase prices reported by operators.

Production costs can vary because of different debt and landownership situations and other factors. ERS analysts estimate economic costs as full-ownership costs to allow comparisons of production costs without regard to levels of equity or tenure.

Economic costs include variable cash expenses, general farm overhead, taxes and insurance, capital replacement, operating capital, other nonland capital, land, and unpaid labor. Costs of operating capital, nonland capital, land, and unpaid labor are based on annual returns that could be earned in alternative uses in the current year. Total labor expense is divided into hired labor and unpaid labor. Unpaid labor is valued at the hired wage rate.

The primary data source for COP estimates is the Farm Costs and Returns Survey (FCRS). The FCRS provides such data as seeding rates, fertilizer and chemical use, field operations, size and type of equipment, custom operations, breeding fees, livestock hauling, and labor. FCRS data are combined with price and quantity data available from NASS surveys. Crop acreages, crop yields, prices received for agricultural commodities, and prices paid for agricultural inputs are examples. ERS uses engineering specifications and FCRS data to estimate fuel, repair, and machinery replacement costs.

COP estimates are prepared for barley, burley tobacco, corn, cotton, flue-cured tobacco, oats, peanuts, rice, sorghum, soybeans, sugar beets, sugarcane, and wheat. Livestock and dairy estimates are prepared for milk, cattle, hogs, and sheep.

Publications and Availability

COP estimates are published annually in *Economic Indicators of the Farm Sector: Costs of Production--Major Field Crops,* in *Economic Indicators of the Farm Sector: Costs of Production--Livestock and Dairy*, in March and September issues of the *Sugar and Sweetener Situation and Outlook Report* and in September and December issues of the *Tobacco Situation and Outlook Report.*
Reports on how costs vary among producers of major commodities are forthcoming. For a more detailed description of these estimates, see *Major Statistical Series of the U.S. Department of Agriculture: Costs of Production* (AH-671, Vol. 12, Revised 1992).

COP estimates are available in electronic form for 11 major field crops and for several livestock and dairy enterprises. For a listing of electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contact: Mitchell Morehart, Farm Sector Financial Analysis Branch, Agriculture and Rural Economy Division (202-219-0801).

Sample table--U.S. corn production cash costs and returns and economic costs and returns of operators and landlords per planted acre, 1987-90[1]

Item	1987	1988	1989	1990
		Dollars		
Gross value of production (excluding direct Government payments):				
Corn	186.02	217.14	254.92	257.82
Total, gross value of production	186.02	217.14	254.92	257.82
Cash expenses:				
Seed	18.86	18.90	21.02	20.52
Fertilizer	35.25	43.09	45.05	40.43
Lime and gypsum	2.25	2.30	2.16	2.15
Chemicals	20.19	20.49	21.51	22.64
Custom operations	5.39	4.68	5.76	6.02
Fuel, lube, and electricity	10.60	10.63	11.88	12.81
Repairs	8.25	8.10	8.94	9.28
Hired labor	7.83	7.87	8.29	8.61
Purchased irrigation water	.31	.32	.31	0.30
Drying	8.20	5.96	8.24	11.19
Technical services	.26	.26	.26	.26
Total, variable cash expenses	117.39	122.60	133.42	134.21
General farm overhead	10.15	10.81	10.42	12.06
Taxes and insurance	14.65	14.59	14.87	14.85
Interest on operating loans	5.45	4.91	5.08	5.46
Interest on real estate	10.66	10.03	10.05	11.19
Total, fixed cash expenses	40.91	40.34	40.42	43.56
Total, cash expenses	158.30	162.94	173.84	177.77
Gross value of production, less cash expenses	27.72	54.20	81.08	80.05
Economic (full-ownership) costs:				
Variable cash expenses	117.39	122.60	133.42	134.21
General farm overhead	10.15	10.81	10.42	12.06
Taxes and insurance	14.65	14.59	14.87	14.85
Capital replacement	30.08	30.95	34.01	35.61
Operating capital	2.75	3.41	4.19	3.82
Other nonland capital	5.25	6.12	8.14	9.28
Land	44.26	52.83	57.80	59.63
Unpaid labor	20.04	21.26	22.04	23.06
Total, economic (full-ownership) costs	244.57	262.57	284.89	292.52
Residual returns to management and risk, or gross value of production, less total economic costs	-58.55	-45.43	-29.97	-34.70
Harvest-period price (dollars per bushel)	1.57	2.61	2.22	2.19
Yield (bushels per planted acre)	118.83	83.22	115.03	117.50

[1]For more details see: *Economic Indicators of the Farm Sector: Costs of Production--Major Field Crops*, 1990, ECIFS 10-4, U.S. Dept. Agr., Econ. Res. Serv., July 1992.

Employment and Value Added by the U.S. Food and Fiber System

ERS estimates reflect the share of national income and employment required to produce, process, and distribute farm-based food and fiber products to domestic and foreign consumers.

Input-output analysis is used to estimate employment and value added by the U.S. food and fiber system. The food and fiber system includes farm production and related activities. It also includes food processing, manufacturing and transportation attributable to the food and fiber system, wholesale and retail distribution of food and farm-originated apparel, and eating establishments.

In a highly developed, interrelated economy like that of the United States, assessing differences in the relative importance of sectors is complicated. Estimates that allow effects of Government policies and economic events to be traced through the economy to show value added and employment are important because such policies and events can affect the various sectors differently. The sectors' shares of employment and value added show how they are interrelated.

Concepts, Methods, and Data

The basic concepts underlying the employment and value-added estimates follow the economic logic of the economywide input-output tables of the U.S. Department of Commerce (USDC). However, ERS combines the 79 sectors in the USDC table into 8 categories for the food and fiber system estimates. The categories include one for manufactured inputs, one for farming, two for industries that process farm products, one for eating places, and two for food-system-related trade and transportation. The eighth includes the rest of the economy or the remaining sectors of the economywide table. It includes mining, fisheries, forestry, and all service industries other than trade, transportation, and eating places. Use of the USDC input-output table establishes the degree of disaggregation that is possible.

ERS publishes base-year and off-year estimates of income and employment in the food and fiber system. Base years are those for which the economywide input-output tables have been published. Off-years are those for which such tables have not been prepared.

Value added, or gross national product (GNP) originating, is the residual after intermediate products consumed (purchases from other economic sectors) are subtracted from gross sector output. Thus, value-added estimates reflect changes in the value of output from a sector, as well as relative price changes within the economy. Value-added estimates can also indicate a sector's ability to adjust to changing economic conditions.

ERS analysts identify 17 individual components of demand in the food and fiber system. These activities are the sources of income and employment. Eight of the 17 activities are related to personal consumption, and five are for exports and imports. Two activities are for changes in farm inventories (livestock and crops), one relates to farm capital expenditures, and one covers other final demands.

Other final-demand activities account for changes in farm commodity inventories held off farms and government purchases (Federal, State, and local) of farm products. Except for 1977, when these items were derived from the economywide input-output table, ERS analysts have constructed the estimates. Changes in commodity inventories held off farms are assumed to change at the same rate as all other off-farm inventories. Similarly, the farm portion of State and local government purchases is assumed to change at the same rate as total purchases. Federal purchases of farm products are assumed to change with changes in the value of stocks held by USDA's Commodity Credit Corporation (CCC).

Data for estimating the 17 components of final demand come primarily from the USDA and USDC. For example, data on purchases of food, tobacco, clothing, and other items are from annual issues of the USDC's *Survey of Current Business*. Agricultural export and import data are from ERS foreign agricultural trade statistics. Capital expenditures are also based on ERS data.

Publications and Availability

Earlier estimates of employment and value added by the food and fiber system were published in ERS's *Economic Indicators of the Farm Sector: Farm Sector Review* (December 1985 and April 1989). A 1987 report *Measuring the Size of the U.S. Food and Fiber System* (AER-566) provided estimates through 1985, along with additional information on their derivation. The annual *Statistical Abstract of the United States* of the Bureau of the Census, includes updated value-added and employment estimates.

Contacts: William Edmondson and Gerald Schluter, National Economy and History Branch, Agriculture and Rural Economy Division (202-219-0785).

Sample table--Contribution to food and fiber output, by components of final demand, 1980-90, selected years

Components of demand	1980	1985	1986	1987	1988	1989	1990
			Billions of current dollars				
Personal consumption expenditures, food:							
Off-premises consumption	272.40	304.50	311.18	310.24	313.87	314.12	308.42
Purchased meals and beverages	115.10	123.04	127.80	135.53	139.89	140.34	140.35
Furnished to employees	6.38	7.09	7.22	7.43	7.67	7.87	8.11
Consumed in farm households	1.10	0.96	0.92	0.81	0.76	0.57	0.55
Total	394.99	435.59	447.12	454.01	462.19	462.90	457.43
Personal consumption expenditures, other:							
Tobacco	24.90	23.89	23.34	23.09	21.95	21.94	21.52
Clothing	96.50	124.98	133.69	136.27	140.16	146.86	146.42
Shoes	18.30	22.20	23.67	24.44	24.84	25.83	26.19
Flowers	4.67	5.26	5.55	6.30	6.71	7.01	6.88
Total	144.37	176.33	186.24	190.10	193.65	201.64	201.01
Net exports:							
Agricultural exports	29.90	18.28	12.37	18.40	20.74	20.97	19.59
Processed food exports	13.50	10.25	12.99	11.76	13.81	14.22	14.15
Agricultural imports	-1.40	-3.01	-3.09	-3.62	-3.82	-3.95	-4.50
Processed food imports	-9.70	-9.62	-8.94	-9.51	-9.51	-9.54	-9.97
Apparel imports	-9.77	-19.53	-22.45	-25.14	-25.72	-27.86	-28.60
Total	22.53	-3.62	-9.12	-8.11	-4.50	-6.17	-9.33
Others:							
Livestock inventory change	1.60	-2.73	-2.13	-1.30	-0.40	-0.10	0.55
Crop inventory change	-6.30	-1.54	-0.28	-4.60	-2.50	5.20	0.95
Other final demand	0.30	7.51	3.06	-2.67	-9.30	-0.41	0.58
Farm capital expenditures	21.79	8.52	8.02	10.61	10.78	10.66	10.82
Total	17.39	11.75	8.67	2.03	-1.42	15.35	12.90
Total	579.28	620.05	632.91	638.04	649.92	673.72	662.01

Farm Income and Related Estimates

ERS estimates of national and State-level income from agriculture allow a range of uses.

Annual sectorwide, national, and State-level estimates of income from agriculture are published in several series, based on various concepts and procedures. All the series use calendar-year accounting, and none reflects gains or losses from the sale of production assets.

Concepts, Methods, and Data

Each of the following series begins with an estimate of gross cash income, but the series differ by including or excluding various additions to income or by treating expenses and other dispositions differently. None of these series accounts for off-farm income.

Net cash income, the least complicated farm income estimate is simply gross cash income, less cash expenses. Gross cash income includes cash receipts from crops and livestock, direct Government payments, and farm-related income. Net CCC loans are treated as sales. Farm-related income includes custom work, forest product sales, recreational income, cooperative dividends, and custom feeding fees. Cash expenses include feed, seeds, fertilizer, pesticides, fuels, repairs, taxes, interest, labor, and similar items.

Net business income differs from net cash income in only one respect: along with cash expenses, an estimate of capital consumption (depreciation plus accidental damage) is subtracted from gross cash income to arrive at net business income.

Net farm income, the most widely recognized farm income series, is an estimate of the net value of goods and services generated by U.S. farming operations during a calendar year. Net farm income estimates serve as input to USDC's GDP and national income estimates. Net farm income is more inclusive and more complicated than either net cash income or net business income. Net farm income accounts for noncash forms of income, such as home consumption of farm products and the imputed rental value of farm dwellings, as well as the value of the net change in producer inventories of major crop and livestock commodities. Expenses for operator farm dwellings, capital consumption, and perquisites to hired farm labor are also accounted for.

In addition to the above income measures, related estimates are made of net cash-flow and returns to operators.

Net cash-flow indicates the farm sector's ability to meet current obligations. Net cash-flow is closely related to net cash income. However, net cash-flow includes changes in loans outstanding, accounts for net rent to nonoperator landlords, considers net changes in operators' currency and demand deposits, and includes capital expenditures.

Returns to operators are derived by reformulating items in the net farm income account, but the gross imputed rental value of operator dwellings and expenses associated with those dwellings are omitted.

Data for the farm income and related estimates are from NASS, the Bureau of the Census, various ERS sources, and ERS/NASS surveys, such as the FCRS. Data on CCC loans and on Government payments come from the Agricultural Stabilization and Conservation Service, the CCC, and other USDA agencies. Some data are from the Bureau of Economic Analysis (BEA), USDC, and other Federal agencies. Some series are benchmarked on censuses or surveys, and the benchmark estimates are moved forward based on the best available annual data.

Publications and Availability

Annual income estimates are published along with numerous related series on receipts and expenses in the *National Financial Summary* and the *State Financial Summary* of *Economic Indicators of the Farm Sector*. ERS also summarizes and publishes monthly crop and livestock receipts and Government payments in *Agricultural Outlook*. Seasonally adjusted annual rate data are estimated each quarter as input to the National Income and Product Accounts.

Quarterly forecasts of net farm income, net cash income, and off-farm income are published in the *Agricultural Income and Finance Situation and Outlook Report* and in *Agricultural Outlook*. A detailed description of the farm income and related estimates is available in *Major Statistical Series of the U.S. Department of Agriculture: Farm Income* (AH-671, Vol. 3, November 1988).

Electronic databases are available for the farm income and related estimates. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contacts: James Johnson (202-219-0800) and Roger Strickland (202-219-0804), Farm Sector Financial Analysis Branch, Agriculture and Rural Economy Division.

Sample table--Illustration of farm income and related estimates, 1990

Item	Net cash income	Net business income	Net farm income	Net cash-flow	Return to operators[1]
			Billion dollars		
Gross income:					
Cash receipts	170.0	170.0	170.0	170.0	170.0
Direct Government payments	9.3	9.3	9.3	9.3	9.3
Farm-related income	6.7	6.7	6.7	6.7	6.7
Total gross cash income	186.0	186.0	186.0	186.0	186.0
Plus:					
Other income and adjustments--					
Value of net change in inventories	NA	NA	2.9	NA	2.9
Home consumption of farm products	NA	NA	0.7	NA	0.7
Gross imputed rental value—					
Laborer dwellings	NA	NA	0.3	NA	0.3
Operator dwellings	NA	NA	5.2	NA	NA
Change in loans outstanding	NA	NA	NA	-0.7	NA
Net change in operators' currency and demand deposits	NA	NA	NA	0.4	NA
Net rent to nonoperator landlords	NA	NA	NA	8.2	NA
Less:					
Cash expenses and dispositions--					
Intermediate product expenses[2]	85.1	85.1	85.9	85.1	85.1
Property taxes[3]	5.0	5.0	5.6	5.0	5.0
Interest[4]	13.8	13.8	14.5	13.8	13.8
Expenses for hired and contract labor	12.0	12.0	12.0	12.0	12.0
Net rent to nonoperator landlords	8.2	8.2	8.2	8.2	8.2
Capital consumption[5]	NA	15.8	17.5	NA	15.8
Perquisites to hired labor	NA	NA	0.5	NA	0.5
Capital expenditures	NA	NA	NA	13.4	NA
Total[6]	61.8	46.0	50.8	56.4	49.4

NA=Not applicable.

[1]Return to operators is calculated in the farm production transactions account.

[2]Repairs and maintenance and miscellaneous expenses related to farm dwellings are included in estimating net farm income.

[3]Taxes on farm operator dwellings are included in estimating net farm income.

[4]Interest attributable to farm operator dwellings is included in estimating net farm income.

[5]For net farm income, capital consumption includes depreciation and accidental damage for farm operator dwellings.

[6]May not add due to rounding.

Farm Sector Balance Sheet

ERS has half a century of annual estimates of assets, debts, and equity for the U.S. farm sector.

Annual estimates of assets, debts, and equity can aid in assessing changes in the wealth position of the U.S. farm sector. These balance sheets, which are as of December 31, begin with 1939. Balance sheets for States begin with 1974, and those by value of sales with 1978.

When combined with other financial measures, balance sheet estimates add to the knowledge of the collective financial situation of the Nation's farms and are useful in designing agricultural and credit policies and programs.

Concepts, Methods, and Data

The sector balance sheet lists physical and financial assets at current market values. Assets include real estate normally used to produce agricultural products, regardless of ownership. Also included are nonreal estate assets, such as livestock and poultry, machinery and motor vehicles, stored crops, purchased inputs, and financial assets. Real estate assets are farmland, service buildings, and operator dwellings on farms. The balance sheet excluding farm households omits operator dwellings, household equipment and furnishings, a share of the value of automobiles and trucks, and certain financial assets.

Analysts multiply acres of farmland by average per-acre value for each State to estimate total value. The national value per acre is a weighted average of the States. The ratio of building values to total real estate values, which is derived from census benchmarks, allows annual estimates of building values. Operator dwellings are valued by applying benchmark estimates of the ratio of operator dwelling values to the value of all buildings. Operator dwellings off the farm are treated as nonfarm assets. Separate farm housing for nonfamily workers is listed with service structures.

Livestock and poultry inventories and values are mainly from NASS data. Machinery and equipment stocks are calculated as last year's ending stocks, plus capital expenditures, as derived from survey data. Accidental damage, the value of losses, and depreciation are subtracted. Crop inventories include crops held on farms, except those under CCC loans, but exclude crops not yet harvested and stocks held by firms involved in processing and distribution. CCC loans are excluded because net CCC loans are treated as sales. The value of household equipment and furnishings is estimated by the Agricultural Research Service. Land, buildings, and machinery owned by nonfarm landlords but used in raising broilers are listed as farm assets. However, broilers are treated as assets of nonfarm processing firms.

Farm sector debt estimates are based on loan data, census benchmarks, and USDA survey data. Among lenders and lending agencies are the Farmers Home Administration, life insurance companies, banks, and the Farm Credit System. Amounts owed to individuals and others are also estimated.

Debt is reported as real estate or nonreal estate. Loans secured by real estate are generally for longer terms than nonreal estate loans.

Assets and debt of nonfarm firms that provide farm inputs or market or process agricultural products are excluded. Thus, machinery leased from nonfarm firms is excluded. Machinery owned by one farm operator and leased to another is considered a farm asset. Farm assets and debt of operators and nonfarm landlords are included but their nonfarm assets and debt are not. Thus, the balance sheet is not a consolidation of the total assets, debt, and net worth of those involved in farming.

To derive equity in the farm sector, total debt is subtracted from total assets.

Publications and Availability

Balance sheet statistics, including those by value of sales, are published each year in *Economic Indicators of the Farm Sector: National Financial Summary*. State balance sheets are available annually in *Economic Indicators of the Farm Sector: State Financial Summary*. A separate report showing additional detail is *Farm Sector Balance Sheet, Including Operator Households, 1960-89: United States and by State* (SB-826, August 1991). Balance sheet forecasts are published in the *Agricultural Income and Finance Situation and Outlook Report.*

For more detail see *Major Statistical Series of the U.S. Department of Agriculture: The Balance Sheet* (AH-671, Vol. 11, May 1989).

Balance sheet data are available electronically. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contacts: Duane Hacklander or Kenneth Erickson, Farm Sector Financial Analysis Branch, Agriculture and Rural Economy Division (202-219-0798).

Sample table--Farm sector balance sheet components (including operator households), December 31, 1980-90

Year	Real estate assets	Nonreal estate assets					Financial assets	Total assets
		Livestock and poultry	Machinery and motor vehicles	Crops	Purchased inputs	Household equipment and furnishings		
				Billion dollars				
1980	850.1	60.6	86.9	32.8	NA	19.4	39.9	1,089.2
1981	851.7	53.5	92.5	30.0	NA	20.8	40.9	1,089.4
1982	819.1	53.0	92.6	26.4	NA	23.0	42.8	1,056.8
1983	829.3	49.5	92.1	24.4	NA	24.4	44.6	1,064.3
1984	735.0	49.5	91.1	26.3	2.0	24.3	47.7	975.9
1985	657.0	46.3	88.3	22.9	1.2	27.8	49.3	892.8
1986	613.0	47.8	86.1	16.6	2.1	28.7	53.8	848.0
1987	658.6	58.0	84.5	17.8	3.0	32.9	56.7	911.4
1988	687.0	62.2	86.7	22.7	3.3	37.0	58.0	956.8
1989	692.7	66.2	90.2	23.3	2.7	42.2	58.7	976.0
1990	702.6	69.1	91.7	22.4	2.8	46.3	61.2	996.2

	Liabilities			Proprietors' equity	Total claims	Debt-to-asset ratio
	Real estate debt	Nonreal estate debt	Total			
	Billion dollars					*Percent*
1980	97.5	81.2	178.7	910.5	1,089.2	16.4
1981	107.2	88.2	195.4	894.0	1,089.4	17.9
1982	111.3	91.8	203.1	853.7	1,056.8	19.2
1983	113.7	92.7	206.5	857.9	1,064.3	19.4
1984	112.3	92.0	204.3	771.5	975.9	20.9
1985	105.7	82.2	187.9	704.9	892.8	21.0
1986	95.9	70.8	166.6	681.3	848.0	19.7
1987	87.7	66.0	153.7	757.7	911.4	16.9
1988	83.0	65.6	148.5	808.3	956.8	15.5
1989	80.5	65.5	146.0	830.0	976.0	15.0
1990	78.4	66.7	145.1	851.1	996.2	14.6

NA = Not available.

Food Spending by American Households

Household food spending estimates help analysts assess market conditions, product distribution patterns, consumer buying habits, and consumer living conditions.

Weekly per-person food expenditures for urban households are published in dollars and as indexes. The data are shown by socioeconomic and demographic characteristics. Selected food expenditures and prices are summarized for urban and rural households.

Information on food spending is useful in understanding households spending habits by size, race, income, geographic area, and other characteristics. The information can aid in assessing market conditions, product distribution patterns, consumer buying habits, and consumer living conditions.

Combined with demographic and income projections, the information can help anticipate consumption trends and identify typical market baskets of foods for specific population groups. Market baskets (quantities of foods bought in retail foodstores by households for at-home consumption) are useful in developing price indexes tailored to the consumption patterns of these groups.

Concepts, Methods, and Data

Data for the American household spending estimates are from the Continuing Consumer Expenditure Survey (CCES) conducted by the Bureau of the Census, for the Labor Department's Bureau of Labor Statistics (BLS). The CCES contains the most recent and most comprehensive data on food spending. However, ERS provides more food-item detail than BLS.

The CCES includes: (1) an interview panel of 5,000 households every 3 months for a 1-year period, and (2) a diary survey of the same size in which households keep an expenditure diary for two consecutive 1-week periods.

The interview panel survey obtains data on large and infrequent expenditures, such as for real property, automobiles, and major appliances, and those that occur regularly, such as rent, utilities, and insurance. Personal expenditures, including food on trips, are included.

The diary survey obtains information on small, frequently purchased items that are normally difficult to recall, including food and beverages, tobacco, housekeeping supplies, nonprescription drugs, personal care products and services, fuels, and utilities. This component of the CCES is the source of data for the ERS report.

Respondents record the full cost of each purchase, even though full payment may not have been made at purchase. The expenditure estimates exclude purchases while away from home overnight, those directly assignable to business use, and periodic credit or installment payments on goods or services already acquired. Expenditures include excise and sales taxes.

Listed expenditures are averages for all urban households with given characteristics, regardless of whether a particular household purchased the specific food item during the recordkeeping period. Average expenditures may be considerably less than expenditures by households that purchased the item. Even within groups with similar characteristics, expenditures vary greatly. Factors such as income, age of household members, and geographic location of residence influence expenditures, and multiple factors are not held constant within any given table.

Publications and Availability

The food spending data were published in detail by ERS in *Food Spending in American Households, 1980-88* (SB-824, May 1991). Similar publications with the same title were published in 1985 (SB-731), 1987 (SB-753), and 1990 (SB-791). SB-824 shows detailed expenditures for 1987 and 1988. Selected food-item expenditures and prices are summarized for 1980-88 and rural-urban comparisons are made.

The CCES, which serves as the basis for the household food spending data, is described along with related information in *Major Statistical Series of the U.S. Department of Agriculture: Consumption and Utilization of Agricultural Products* (AH-671, Vol. 5, October 1989).

Detailed data on household food expenditures and percentage of households purchasing selected food items in a week, by major food groups and by household demographic characteristics, are available electronically. The electronic database also includes Consumer Price Indexes for selected food items sold for home consumption. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contact: Noel Blisard, Food Economics Branch, Commodity Economics Division (202-219-0862).

Sample table--Average weekly per-person food expenditures of urban households, by selected characteristics, 1983-88

Demographic characteristic	1983	1984	1985	1986	1987	1988
			Dollars per person			
All urban households	22.03	22.55	24.24	23.92	25.21	25.68
Number in household:						
One	27.21	30.37	32.94	31.86	33.96	36.73
Two	28.04	26.44	30.01	30.27	31.59	31.59
Three	20.57	23.19	23.61	23.46	24.58	25.48
Four	20.57	20.63	21.29	20.69	22.11	22.47
Five	17.62	18.15	18.75	18.28	19.92	19.23
Six or more	13.87	15.40	15.60	15.38	15.00	15.83
Single female parent with children	13.77	15.98	16.49	14.97	17.50	17.65
Income quintiles:						
First (lowest)	16.19	16.56	18.98	18.88	18.65	19.50
Second	18.05	19.32	20.18	21.09	22.38	22.67
Third (middle)	20.47	22.52	23.08	24.17	25.27	25.19
Fourth	23.23	23.90	25.54	25.16	26.25	28.31
Fifth (highest)	29.98	29.54	31.67	31.28	32.95	31.50
Race:						
White	23.15	23.75	25.42	25.10	26.47	27.03
Black	14.89	14.82	16.71	16.28	17.69	17.89
Other	22.01	21.37	23.22	22.87	21.39	22.11
Age of householder:						
Under 25 (nonstudent)	18.80	20.61	20.85	21.81	22.23	21.99
25-34	19.83	20.06	21.33	21.38	22.62	23.82
35-44	21.35	21.55	23.31	23.48	24.48	24.62
45-54	24.31	25.43	26.94	26.43	26.99	28.06
55-64	26.43	25.65	28.40	27.52	29.44	28.98
Over 64	22.96	24.14	26.28	25.19	27.24	27.26
Region:						
Northeast	24.06	24.03	25.86	26.85	26.48	28.04
Midwest	21.62	21.84	23.29	23.13	24.94	25.23
South	21.52	21.78	23.21	22.44	24.14	24.86
West	23.95	24.90	27.93	25.39	27.43	26.17
Season:						
Winter	21.13	22.61	23.94	23.15	24.56	25.63
Spring	22.10	22.31	25.35	24.32	25.43	25.92
Summer	23.11	22.60	23.71	23.50	25.14	26.43
Fall	21.86	22.67	23.93	24.73	25.70	24.76

Market Basket Statistics

Market basket statistics reflect changes in food costs and measure the farmer's share of the consumer's food dollar.

Market basket statistics measure the variation in charges for marketing foods and in the farm value share of the consumer's food dollar. They also measure changes in prices paid by consumers and returns received by farmers. The data are useful for explaining changes in retail food prices and for interpreting retail and farm price movements.

Concepts, Methods, and Data

The term market basket refers to the quantities of foods bought in retail food stores by urban households for at-home consumption. The market basket consists mainly of foods that originate on U.S. farms. Thus, it excludes fish, coffee, cola drinks, and bananas.

The market basket statistics include: (1) retail costs, (2) farm value, (3) farm-to-retail spreads, and (4) farm value share of the food dollar. Series are computed for the total market basket and for nine major product groups. These statistics are calculated for months, quarters, and years.

The retail cost indexes of the market basket are components of the Bureau of Labor Statistics' Consumer Price Index (CPI) for food at home. Retail costs of the market basket and the CPI for food at home generally move similarly. Small differences result from the exclusion of fish and nonalcoholic beverages from the market basket.

The farm value of the market basket and of each commodity group consists of the payments farmers receive for the quantity of farm products equivalent to the units sold at retail. For most products, the farm product equivalent is larger than the quantity sold at retail because of waste and spoilage at various points in the marketing system. The value of any byproducts is subtracted from the gross farm value to estimate the net farm value for food use.

ERS calculates the farm value of foods in the market basket from average prices received by farmers as published by USDA's National Agricultural Statistics Service (NASS). ERS uses market news prices collected and published by USDA's Federal-State Market News Service when these data provide prices that accurately reflect farm products sold for food use. For example, Market News prices for animals sold for slaughter are used to compute the farm value of red meat. NASS livestock prices are less appropriate because they include feeder stock and herd replacements as well as animals for slaughter.

Retail costs minus the farm value equals the farm-to-retail spread. The farm-to-retail spread is a measure of payments to marketing firms for assembling, processing, transporting, and distributing food. Sometimes the spread is called the marketing charge or margin. However, the price spread concept should be distinguished from the concept of margins as defined and used in the food trade. The farm-to-retail spread represents the difference between average prices at the farm and at retail at a given time. Margins, as calculated by individual firms, are the differences between sales and the costs of goods sold.

The farm value share is the percentage of retail cost accounted for by farm value, or the amount the farmer receives from the consumer's food dollar. Over time, farm value share data reflect relative changes in farm and retail food prices. The size of the farmer's share is not a direct measure of the farmer's economic welfare. For example, farm shares of more than 60 percent for eggs and 30 percent for fresh fruit do not mean that egg producers are more prosperous than fruit growers or receive a fairer proportion of retail prices.

Because animal products usually require more inputs and thus have higher farm values, farmers generally receive more of the consumer's dollar for animal products than for crops. The disposition of products after they leave the farm also influences the farmer's share. Some products, such as bakery and cereal goods and fruits and vegetables, require considerable processing and packaging or are costly to distribute.

Publications and Availability

The market basket statistics are published monthly in *Agricultural Outlook* and annually in *Food Cost Review*. They are also available in *Food Costs...From Farm to Retail* and other USDA publications. A detailed description of market basket statistics is included in *Major Statistical Series of the U.S. Department of Agriculture: Agricultural Marketing Costs and Charges* (AH-671, Vol. 4, July 1987).

Contact: Denis F. Dunham, Food Economics Branch, Commodity Economics Division (202-219-0870).

Sample table--Market basket of farm-originated food products by food group, selected years, 1980-91[1]

Year	Retail cost	Farm value	Farm-to-retail spread	Farm value share	Retail cost	Farm value	Farm-to-retail spread	Farm value share
	---------- *1982-84 = 100* ----------			*Percent*	-------- *1982-84 = 100* ----------			*Percent*
Total market basket					**Meat products**			
1980	88	97	84	37	93	97	89	51
1985	104	96	108	32	99	91	107	47
1989	125	107	134	30	117	104	130	45
1990	134	113	144	30	128	117	140	46
1991[2]	137	106	154	27	132	110	156	42
Dairy products					**Poultry**			
1980	91	96	86	52	94	96	92	54
1985	103	95	110	44	106	106	107	53
1989	116	99	131	41	133	117	151	47
1990	126	102	149	39	132	108	161	44
1991	125	90	157	34	132	102	165	42
Eggs					**Cereal and bakery**			
1980	89	88	89	64	84	111	81	14
1985	91	86	100	61	108	94	110	11
1989	118	108	138	58	132	102	137	9
1990	124	108	153	56	140	91	147	8
1991	121	101	158	54	146	85	154	7
Fresh fruits					**Fresh vegetables**			
1980	84	84	84	26	79	73	81	27
1985	118	111	122	30	104	93	109	31
1989	155	109	176	22	143	123	153	29
1990	175	128	196	23	151	124	165	28
1991	200	174	212	28	154	111	177	24
Processed fruits and vegetables					**Fats and oils**			
1980	83	97	79	23	89	96	87	29
1985	107	118	104	26	109	104	111	26
1989	125	132	123	25	121	96	131	21
1990	133	144	129	26	126	107	133	23
1991	130	121	133	22	132	98	144	20

[1]For more detail see: *Food Cost Review, 1991*, U.S. Dept. Agr., Econ. Res. Serv., AER-662, Aug. 1992.

Total Food Expenditures

A century-long series shows total U.S. food expenditures by individuals, families, businesses, and governments.

Monthly and annual estimates of total U.S. food expenditures by all segments of the economy include spending by families and individuals, governments (such as donated food and meals in military messes and prisons), and businesses (meals for employees and travel expenses). The value of home-produced food, sport fish, and game is also estimated. Annual data are available beginning with 1889.

Concepts, Methods, and Data

Total food expenditures are divided into four categories:

- Food for off-premise use includes food for preparation anywhere except on the premises where sold, such as food for preparation at home, or use on picnics and camping trips.
- Meals and snacks include both take-out food and food for consumption on the premises where sold, such as in restaurants, snack bars, dining halls, and airlines.
- Packaged alcoholic beverages include beer, wine, and liquor for consumption off the premises where sold.
- Alcoholic drinks include alcoholic beverages consumed in bars, restaurants, clubs, and other premises where sold.

Each category is divided between sales and the value acquired without payment, such as home production, game and game fish, donations, and meals in military mess halls, hospitals, institutions, and on airlines.

To estimate most food expenditures, ERS analysts begin with current estimates of retail sales or receipts, mostly from the Bureau of the Census. In 1980, such estimates accounted for 94 percent of food for off-premise use, 73 percent of meals and snacks, and 95 percent or more of alcoholic beverages, including both packaged beverages and drinks consumed in bars, restaurants, and other premises where sold.

Information on the distribution of sales among food, alcoholic beverages, meals and snacks, and other goods by each type of store is available from the Censuses of Retail Trade and Services every 5 years. Data for years between censuses are interpolated by ERS analysts. The exception is sales by grocery stores for which an annual series is available from *Supermarket Business* magazine.

A small percentage of data is based directly on reports of food expenditures, such as sales in railroad dining cars and airline payments for food service.

Some categories, most notably hospitals and institutions, have no data available on food purchases, either on a current or periodic basis. In these cases, base-year data were supplied by surveys such as those for 1969 and 1979. Analysts also derive estimates for some years using other data sources. For example, hospital and institutional use has been estimated using the base-year expenditures and an index incorporating numbers of residents and the wholesale price indexes for food.

Publications and Availability

Annual food expenditures are published by ERS in *Food Consumption, Prices, and Expenditures*, an annual statistical bulletin, and in the quarterly *FoodReview*. Monthly figures are published in *Agricultural Outlook*. Data users may also find of interest the report *Data for Food Demand Analysis: Availability, Characteristics, Options* (AER-613, ERS, USDA, April 1990).

A more complete discussion of the development of this series, including comparisons with other series, is available in *Developing an Integrated Information System for the Food Sector* (AER-575, August 1987). The food expenditure series is also described in *Major Statistical Series of the U.S. Department of Agriculture: Consumption and Utilization of Agricultural Products*, (AH-671, Vol. 5, Oct. 1989). Total food expenditures data are available electronically. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contact: Alden C. Manchester, Office of the Director, Commodity Economics Division (202-219-0880).

Sample table--Expenditures for food for off-premise use, 1985-90, selected years[1]

Year	Food stores	Other stores	Food delivered to home, mail order	Farmers manufacturers, wholesalers	Total sales	Food produced at home, donations	Grand total
				Million dollars			
1985	202,982	17,179	2,768	4,637	227,566	7,079	234,645
1988	224,427	22,666	3,725	5,247	256,065	8,279	264,344
1989	240,442	24,318	3,929	5,623	274,312	8,245	282,557
1990	260,905	25,867	4,200	5,738	296,710	8,610	305,320
1991	267,653	26,357	4,204	5,826	304,040	8,660	312,700

Sample table--Expenditures for meals and snacks, 1985-90, selected years[1]

Year	Eating and drinking places	Hotels and motels	Retail stores, direct selling	Recreational places	Schools and colleges	All other	Total
				Million dollars			
1985	111,760	9,168	10,482	3,737	14,651	21,827	171,625
1988	147,970	11,896	12,468	5,003	17,742	26,267	221,346
1989	155,946	12,343	13,289	5,431	18,491	28,260	233,760
1990	165,327	12,849	14,317	5,753	19,279	30,775	248,300
1991	171,446	13,625	14,735	5,937	19,934	31,989	257,666

Sample table--Expenditures for food and alcoholic beverages, 1985-90, selected years[1]

	Food for off-premise use			Meals and snacks				
Year	Sales	Food produced at home, donated	Total	Sales	Supplied, donated	Total	All food	Alcoholic beverages
				Million dollars				
1985	227,566	7,079	234,645	149,927	21,698	171,625	406,270	64,154
1988	256,065	8,279	264,344	195,559	25,787	221,346	485,690	72,425
1989	274,312	8,245	282,557	206,274	27,486	233,760	516,317	75,598
1990	296,710	8,610	305,320	218,664	29,636	248,300	553,620	81,049
1991	304,040	8,660	312,700	226,959	30,707	256,666	570,366	84,748

[1]For detail on items included and additional years, see *Food Consumption, Prices, and Expenditures, 1970-90*, U.S. Dept. Agr., Econ. Res. Serv., SB-840.

U.S. Food Supply Statistics

Food supply and consumption are estimated annually for more than 200 foods.

U.S. food supply statistics annually measure domestic food consumption at the national aggregate level for more than 200 foods. The food supply historical series, first published in 1941 and extended back to 1909 for many foods, are the only data available for assessing long-term U.S. trends in food and nutrient availability.

Concepts, Methods, and Data

Total food supply estimates in the United States and most other countries are based on estimates of commodity flows from production to end uses. The estimates involve the development of supply and utilization balance sheets for each major commodity from which human foods are produced. Total available supply is the sum of beginning inventories, production, and imports. These three components are either directly measurable or are estimated by Government agencies using sampling and statistical methods.

For most commodities, measurable uses are exports, industrial uses, farm inputs (seed and feed), and end-of-year inventories. Food available for human use is usually estimated as a residual after subtracting other uses from the total available supply. Food availability for some commodities, however, is not the residual component. In the case of wheat, for example, food availability is estimated from manufacturers' reports on flour milling, and feed use is then estimated as a residual.

Food available for human use represents disappearance of food into the marketing system. Thus, it is often referred to as food disappearance. It measures food supplies for consumption through all outlets, at home, and away from home. Per capita food consumption usually is calculated by dividing total food disappearance by the U.S. total population.

Food disappearance as an estimate of human consumption provides an upper bound on the amount of food available for consumption. Food disappearance estimates may overstate actual consumption because they include spoilage and waste accumulated in the marketing system and in the home. In general, food disappearance data serve more appropriately as indicators of trends in consumption over time than as measures of absolute levels of food eaten.

USDA's Nationwide Food Consumption Surveys are usually used to analyze food use by U.S. households or food intake by individuals. These surveys are conducted by the Human Nutrition Information Service.

The index of per capita food consumption is a price-weighted index developed to account for changes in the volume of food consumed and for shifts between foods of different economic value. The index is computed using fixed price weights according to the Laspeyres formula.

Publications and Availability

The food supply statistics are published annually in *Food Consumption, Prices, and Expenditures*, and other USDA publications. A detailed description of food supply statistics is included in *Major Statistical Series of the U.S. Department of Agriculture: Consumption and Utilization of Agricultural Products* (AH-671, Vol. 5, October 1989).

Electronic data products are available for the U.S. food supply statistics. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contact: Judith Jones Putnam, Food Economics Branch, Commodity Economics Division (202-219-0870).

Sample table--Supply and utilization of agricultural commodities, selected years, 1985-91[1]

Commodity and marketing year	Supply				Utilization				
	Production	Imports	Beginning stocks	Total supply	Export	Shipments to U.S. territories	Nonfood use	Ending stocks	Total food disappearance
	Million pounds								
Beef[2]									
1985	23,728	2,071	472	26,271	325	51	--	420	25,476
1988	23,589	2,379	386	26,353	680	64	--	422	25,188
1989	23,087	2,178	422	25,687	1,023	61	--	335	24,269
1990	22,743	2,356	335	25,434	1,006	69	--	397	23,961
1991[P]	22,910	2,406	397	25,714	1,188	69	--	419	24,038
Chicken[3]									
1985	14,044	--	139	14,183	437	144	--	171	13,431
1988	16,563	--	213	16,776	791	159	--	192	15,634
1989	17,758	--	192	17,951	838	182	--	228	16,704
1990	18,953	--	228	19,181	1,168	168	--	250	17,594
1991[P]	20,063	--	250	20,313	1,289	168	--	311	18,546
Wheat[4]									
1985	2,424	16	1,425	3,866	909	--	377	1,905	674
1988	1,812	23	1,261	3,096	1,419	--	249	702	726
1989	2,037	23	702	2,762	1,233	--	239	537	753
1990	2,736	36	537	3,309	1,068	--	580	866	796
1991[P]	1,981	35	866	2,882	1,275	--	442	390	775
Rice[5]									
1985	139	2	47	187	62	5	25	65	31
1988	130	3	51	184	72	5	25	31	50
1989	160	4	31	195	86	5	25	27	52
1990	155	4	27	186	77	5	22	26	56
1991[P]	156	5	26	187	71	4	28	25	59

-- = Not available.

P = preliminary.

[1]For additional years and commodities and more details, see: *Food Consumption, Prices and Expenditures, 1970-90*, U.S. Dept. Agr., Econ. Res. Serv. (SB-840, July 1992). Totals may not add due to rounding.

[2]Carcass weight.

[3]Ready-to-cook weight. Includes amount (nearly 15 percent in 1991) of ready-to-cook chicken going to pet food as well as some water leakage that occurs when chicken is cut up before packaging.

[4]Grain equivalent.

[5]Rough basis.

Food Aid Needs Estimates

Estimates of food aid needs for low-income developing countries show the amount of food aid needed by those countries to reach their historical per capita consumption or their minimum nutritional requirements.

Estimates of food aid needs of low-income developing countries show the amount of food aid needed by specific countries or regions to meet consumption targets. Consumption targets are defined as (1) the average historical per capita consumption, or (2) the provision of sufficient foods to meet the population's minimum nutritional requirements.

In 1991, the annual report on food needs included current year estimates and projections for the following year for 40 African countries. In 1990, an annual report was published using revised estimation methods for 55 countries in Africa, Asia, and Latin America. Food needs assessments have been published quarterly since 1985.

Domestic grain production, anticipated commercial imports, and adjustments for changes in stocks are taken into account in estimating food aid needs.

Estimates of food aid needs are useful in understanding the food situation in developing countries. Such estimates are also useful in identifying countries or regions that are vulnerable to food shortages. The information can aid in allocating food assistance by donor nations among countries.

Concepts, Methods, and Data

Food aid needs are determined by calculating the gap between target consumption and the availability of cereals for food use. Target consumption is measured in two ways. The first target, "status quo," uses the most recent 5-year average of per capita consumption to support average consumption in the near future close to that of the past.

The nutrition-based target estimates consider the additional food required to raise per capita caloric intake to the minimum requirements recommended by the United Nations (UN) Food and Agriculture Organization (FAO).

Quantities of food aid required are estimated for the short run (current plus next year). The estimates are limited to cereals because they are the most important food aid commodities and account for a significant portion of total calorie intake, and because the data for other food crops are inadequate.

The estimates assume that:

(1) Consumption of cereals in food-deficient countries is a residual that is limited by domestic supply, net of stock changes, commercial imports, waste, and food-aid receipts.

(2) Commercial imports of cereals are forecast for the current and following years using vector autoregression models. These models project commercial imports based on historical movements in production and commercial imports.

(3) Domestic fluctuations in production are mostly explained by domestic policies, weather, and substitution among crops for economic reasons.

The difference between estimates of actual consumption and the status-quo or nutritional target gives the estimated food needs requirement. The status-quo estimates make no provision for improving substandard diets or for reducing allocations to countries with relatively satisfactory diets. Because status-quo estimates represent dietary levels achieved in the past, they can usually be considered to be consistent with the country's ability to utilize food imports.

Nutrition-based estimates assume that food aid is utilized in a way consistent with nutritional need. Thus, the nutrition-based measure can be viewed as the additional food needed. However, the measure may not be consistent with the country's ability to utilize food imports.

Food aid estimates require data on domestic production, imports, exports, stocks, and nonfood use. Most of the data used in the food aid needs estimates come from ERS sources, the Foreign Agricultural Service of USDA, the Bureau of the Census, the World Bank, and the FAO.

Publications and Availability

Assessments of food assistance needs were most recently reported in *Global Food Needs Assessment* (GFA-3), November 1992.

Contact: Margaret Missiaen, Africa and Middle East Branch, Agriculture and Trade Analysis Division (202-219-0630).

Sample table--Summary of forecast cereal food aid needs

Region and marketing year	Production	Commercial imports	Food aid needs					
			Status quo			Nutrition-based		
			Food use	With stock adjustment	Constant stocks	Food use	With stock adjustment	Constant stocks
			Million tons					
Central Africa								
1991/92	2.30	0.46	2.31	0.15	0.17	2.66	0.50	0.51
1992/93	2.32	0.56	2.39	0.13	0.14	2.74	0.48	0.49
East Africa								
1991/92	18.40	0.68	18.49	1.95	2.46	20.19	3.97	4.30
1992/93	20.00	0.68	19.10	2.54	1.76	20.86	4.60	3.58
Southern Africa								
1991/92	7.89	0.82	8.35	1.30	1.56	9.34	2.30	2.57
1992/93	8.61	0.87	8.57	1.42	1.22	9.59	2.44	2.22
West Africa								
1991/92	20.58	2.60	21.29	2.71	2.44	23.17	4.59	4.32
1992/93	21.34	2.75	21.95	2.53	2.32	23.89	4.47	4.28
North Africa								
1991/92	24.94	16.72	22.09	0.00	0.00	16.98	0.00	0.00
1992/93	24.19	17.63	22.63	0.00	0.15	17.38	0.00	0.00
Sub-Saharan Africa								
1991/92	49.17	4.56	50.43	6.11	6.61	55.36	11.36	11.70
1992/93	52.28	4.86	52.01	6.62	5.44	57.05	11.99	10.57
Africa total								
1991/92	74.11	21.28	72.53	6.11	6.61	72.33	11.36	11.70
1992/93	76.37	22.49	74.63	6.62	5.60	74.46	11.99	10.57

Producer and Consumer Subsidy Equivalents

Measures of implied subsidies and taxes are prepared for more than 40 commodities and products in 27 countries to allow examination of effects of government food and agricultural policies.

ERS publishes producer subsidy equivalents (PSE's) and consumer subsidy equivalents (CSE's) for more than 40 agricultural commodities and products in 27 countries and the European Community. The calculations include about 78 percent of the world's population and 83 percent of its gross domestic product. PSE's and CSE's measure the subsidies or taxes implied by government food and agricultural policies and provide a database for negotiations on trade liberalization. Policy analysts can use PSE's and CSE's to examine effects of policies.

Concepts, Methods, and Data

PSE's and CSE's are estimates of the value of transfers to producers or consumers of a given commodity, which results from government policies. The first way of measuring transfers traces the flow of both direct and indirect government expenditures to producers or consumers. A dollar of government expenditures counts as a dollar of transfers. The burden from budgetary expenditures falls on taxpayers.

The second way of measuring transfers imputes the **effects** of government policies by estimating the difference between actual domestic prices and what they would have been in the absence of trade impediments. The price distortion burden falls on consumers when policies raise domestic prices above free-trade prices, and on producers when domestic prices are kept below free-trade prices. The percentage PSE is total transfers from government divided by the commodity's value to producers. The value to producers is the commodity's market value plus any direct government payments, such as deficiency payments.

Changes in world prices, exchange rates, or domestic production can alter the PSE, even without changes in government policies. Moreover, all transfers do not have the same weight in the percentage PSE calculation. A country can lower the percentage PSE without changing total transfers to producers by shifting transfers from indirect programs to price support programs or direct payments. The PSE per ton of output, unlike the percentage PSE, does not depend on the policy mix, so users may prefer to use the per-ton indicator.

Calculations for the CSE are analogous to those for the PSE, but ERS calculations for the CSE do not include any direct payments to consumers.

Because policies are interlinked, it can be both impractical and misleading to try to estimate the separate contribution of every policy element. When policy elements cannot be individually measured, their combined effect is calculated from the difference between the domestic price and a world trade price (adjusted if necessary for marketing and processing costs and for quality differences).

There are general guidelines for calculating subsidy equivalent measures, but few set rules. However, the calculations must fit each country's policy set as closely as possible, given available data and information. Direct comparison of PSE's and CSE's across countries can lead to incorrect conclusions because:

- Information on policy coverage may be limited.
- Coverage of State and Provincial policies is available only for Canada and the United States.
- Credit and irrigation subsidies are sometimes omitted because of limited data.
- Products and commodities differ among countries.
- There is no exact process for classifying policies.
- Data availability and quality vary by country.
- Hyperinflation makes subsidies difficult to measure.

Publications and Availability

ERS published a summary of subsidy equivalents and the methods of calculation in *Estimates of Producer and Consumer Subsidy Equivalents: Government Intervention in Agriculture, 1982-87* (SB-803, April 1990). The report includes a list of references. Data users may also find *GATT and Agriculture: Concepts of PSE's and CSE's* (MP-1468, April 1989) helpful.

For a listing of electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contact: Carl Mabbs-Zeno, Trade and Development Analysis Branch, Agriculture and Trade Analysis Division (202-219-0680).

Sample table--Producer subsidy equivalents for Argentina, 1985-89[1]

Item	Unit[2]	1985	1986	1987	1988	1989
All commodities:						
Value to producers	Million australes	1,449	2,001	4,827	33,242	672,936
Total transfers to producers	Million australes	-554	-497	-5	-6,001	-322,965
Four-commodity PSE	Percent	-38	-25	0	-18	-48
Policy transfers by type:						
Price intervention	Million australes	-862	-645	-612	-1,670	-580,124
Economywide policies	Million australes	309	148	607	-4,331	257,159
Policy transfers by commodity:						
Corn	Million australes	-151	-81	-133	-1,065	-53,308
Sorghum	Million australes	-79	-66	-55	-398	-14,752
Soybeans	Million australes	-193	-314	-32	-4,168	-159,801
Wheat	Million australes	-130	-36	215	-371	-95,104
PSE by commodity:						
Corn	Percent	-39	-14	-14	-19	-59
Sorghum	Percent	-70	-58	-28	-34	-91
Soybeans	Percent	-42	-40	-1	-23	-53
Wheat	Percent	-26	-7	15	-4	-36
Corn:						
Level of production	1,000 tons	11,900	12,400	9,250	9,000	5,000
Producer price	Price per ton	32	48	100	619	18,217
Reference price	Price per ton	66	78	172	913	44,769
Value to producers	Million australes	384	593	921	5,575	91,086
Policy transfers to producers	Million australes	-239	-125	-276	-248	-93,721
Total transfers to producers	Million australes	-151	-81	-133	-1,065	-53,308
PSE as ratio to producers' value	Percent	-39	-14	-14	-19	-59
PSE per ton, in local currency	Price per ton	-13	-7	-14	-118	-10,662
PSE per ton	U.S. dollars	-21	-7	-7	-13	-27

[1]For details for other countries and commodities, see *Estimates of Producer and Consumer Subsidy Equivalents: Goverment Intervention in Agriculture, 1982-87*, U.S. Dept. Agr., Econ. Res. Serv. (SB-803, Apr. 1990).

[2]Values are generally expressed in local currency.

U.S. Agricultural Trade

ERS publishes monthly, calendar-year, and fiscal-year data to reflect the current status of U.S. foreign agricultural trade, by commodity and country.

U.S. agricultural trade statistics published by ERS consist of monthly, calendar-year, and fiscal-year estimates based on compilations of U.S. Customs Service reports by the Bureau of the Census, U.S. Department of Commerce. The Harmonized Commodity Description and Coding System was adopted in 1989.

Monthly ERS data emphasize the current status of U.S. foreign agricultural trade, including food-aid shipments and price developments. ERS summarizes cumulative commodity data by quantity and value. Country totals are published for the current fiscal year and the corresponding period of the preceding year. In December, fiscal-year figures are published. ERS also maintains detailed quarterly and annual data for dollar sales and exports under government-financed programs. Later, calendar-year figures and detailed supplements are published.

Concepts, Methods, and Data

The trade series issued by ERS includes: (1) food, excluding marine products, (2) other agricultural products, such as raw hides and skins, fats, oils, starches, beer, and wines, and (3) selected nonagricultural commodities generally used as farm production inputs, such as fertilizer, pesticides, and machinery. Manufactured products such as textiles, leather, cigarettes, and distilled alcoholic beverages are not considered agricultural, nor are forest products.

Agricultural exports relate to U.S. domestic products and to commodities of foreign origin changed in form or enhanced in value by further processing in the United States. When materials of foreign origin are imported into the United States and incorporated with U.S.-produced materials, the final products are considered domestic. Shipments valued at less than $2,500 are not shown by commodity, but are reflected in agricultural and total trade.

Export value is generally equivalent to a free-alongside-ship (f.a.s.) value at the U.S. port, based on the transaction price, including inland transportation, insurance, and other costs incurred in placing the merchandise alongside the carrier. The country of destination is where goods are to be consumed, further processed, or manufactured.

When the exporter does not know the final destination for commodities destined for transshipment ports, ERS credits them to the last country to which the exporter knows the merchandise will be shipped before processing. Therefore, agricultural exports tend to be overcounted for such countries as Belgium and The Netherlands, and undercounted for others. ERS has estimated transshipments of U.S. agricultural exports annually since 1955. Estimates by commodity and country of destination are based on information from grain inspections and transshipment statistics of other countries. Beginning with January 1990 data, Canadian import statistics replaced U.S. statistics on exports to Canada. Estimates of the value of U.S. agricultural exports by State of origin are based on the State's share of national production or sales of the commodity. Estimates are not available on the destination of commodities by State of origin.

U.S. agricultural imports for consumption include those for immediate consumption and withdrawals from bonded warehouses for domestic use. The value of imports is usually based on the export market or customs value in the country of origin. This value understates the total cost of U.S. imports because it excludes import duties, ocean freight, marine insurance, and other incidental costs of importing. Monthly and calendar-year import data are available on a cost-insurance-freight (c.i.f.) basis.

When the country of origin is unknown, imports are credited to the country of shipment. Information on merchandise imports comes from the import entry and warehouse withdrawal forms filed by importers.

Publications and Availability

U.S. foreign agricultural trade statistics are published bimonthly in *Foreign Agricultural Trade of the United States* (FATUS), its fiscal- and calendar-year supplements, and monthly in *U.S. Agricultural Trade Update*. Data are also available in *Agricultural Outlook*.

For a more detailed description of the foreign trade statistics see *Major Statistical Series of the U.S. Department of Agriculture, International Agricultural Statistics* (AH-671, Vol. 10, October 1987). Also see the November 1991 supplement to AH-671.

Foreign agricultural trade statistics are available in electronic form. For a listing of electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contact: Thomas A. Warden, Commodity and Trade Analysis Branch, Commodity Economics Division (202-219-0822).

Sample table--U.S. agricultural exports and imports, value by months, 1991 and 1992[1]

Month	Exports		Imports	
	FY 1991	FY 1992	FY 1991	FY 1992
		Million dollars		
October	3,081	3,396	1,923	1,939
November	3,498	4,028	1,901	1,878
December	3,165	3,902	1,810	1,948
October-December	9,744	11,326	5,634	5,765
January	3,226	3,668	1,930	2,051
February	3,491	3,859	1,869	1,938
March	3,636	3,739	1,962	2,131
January-March	10,353	11,266	5,761	6,120
April	3,146	3,706	2,074	2,157
May	3,092	NA	1,966	NA
June	2,653	NA	1,884	NA
April-June	8,891	NA	5,924	NA
July	2,929	NA	1,760	NA
August	2,841	NA	1,706	NA
September	2,854	NA	1,802	NA
July-September	8,621	NA	5,268	NA
Total	37,609	NA	22,588	NA
Monthly average	3,134	NA	1,882	NA

[1]Commodity and country detail are also published.
NA = Not available.

Sample table--Agricultural, nonagricultural, and total trade balance

Item	October-April		April	
	1990/91	1991/92	1991	1992
		Million dollars		
Agricultural exports	23,243	26,299	3,146	3,706
Nonagricultural exports	206,286	218,584	31,287	31,625
Total exports	229,529	244,883	34,433	35,331
Agricultural imports	13,469	14,042	2,074	2,157
Nonagricultural imports	271,390	275,793	37,248	39,923
Total imports	284,859	289,835	39,322	42,080
Agricultural trade balance	9,774	12,257	1,072	1,549
Nonagricultural trade balance	-65,104	-57,209	-5,961	-8,298
Total trade balance	-55,330	-44,952	-4,889	-6,749

Value-Weighted Quantity Indexes for Agricultural Exports

Value-weighted indexes reflect changes in exports of processed agricultural products.

Value-weighted quantity indexes for U.S. agricultural exports, first published in 1991, improved the measurement of quantities of high-value products exported to other countries. Such information can be important in decisionmaking and policy formulation. Increased exports of processed products could lessen U.S. dependence on sales of bulk commodities and have a greater effect on U.S. economic activity and employment than exports of less processed commodities.

Concepts, Methods, and Data

ERS analysts prepared the initial indexes by computing an unweighted annual export quantity index for each of 463 commodities and 149 countries. ERS used 26 years of data (1961-86), provided by the United Nations Food and Agriculture Organization, which reports exports of food, feed, and tobacco. Analysts weighted the indexes using 1980 export values to compute indexes by degree of processing for 24 different product/commodity classes.

Next, analysts aggregated the indexes across product/commodity classes by degree of processing: highly processed products, semiprocessed products, high-value unprocessed commodities, low-value unprocessed commodities, and low-value byproducts.

ERS aggregated the country indexes into 7 economic development groups of countries and 13 geographic regions. The economic development groups of countries were the industrial market, upper-middle-income, lower-middle-income, high-income oil-exporting, low-income, and centrally planned economies. Some countries were listed as not classified. Specific countries in each of the groups were identified in the published report. While excluded from the economic development groups and geographic regions, the United States was included in the world total. The World Bank's country classification served as the basis for the economic development groups, except that nonmarket economies were called centrally planned economies in preparing the indexes.

The indexes listed the regions used in the ERS report *World Agriculture Trends and Indicators*. The regions were North America, Central America, Caribbean, South America, Western Europe, Eastern Europe, the former USSR, Africa, Middle East, South Asia, Southeast Asia and Pacific Islands, East Asia, and Australia and New Zealand.

Publications and Availability

The value-weighted indexes are available in *Value-Weighted Quantity Indices of Exports for High-Value Processed Agricultural Products* (SB-827, August 1991). An electronic database is also available. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contact: Larry Traub, Markets and Competition Branch, Agriculture and Trade Analysis Division (202-219-0705).

Sample table--World: value-weighted quantity indexes for selected commodities and products, by degree of processing, 1970-86, and 1980 export sales[1]

Commodity and degree of processing	1970-74	1975-79	1980-85	1986	Export sales 1980
	----------*1980 = 100*----------				*Million U.S. dollars*
Total for:					
Food, feed, and tobacco	68.81	84.66	113.03	129.20	260,518
Highly processed products	66.17	84.98	109.89	118.88	66,317
Semiprocessed products	63.88	81.95	126.83	170.00	75,650
High-value unprocessed	81.72	90.58	105.50	113.92	60,273
Low-value unprocessed	63.41	80.40	104.51	96.35	56,045
Low-value byproducts	55.72	81.72	119.39	133.39	2,234
Cattle:					
Highly processed	76.85	106.09	103.11	93.17	1,634
Semiprocessed	66.29	87.48	102.11	122.49	10,773
High-value unprocessed	94.90	100.71	102.11	104.62	3,217
Hogs:					
Highly processed	98.38	92.75	106.69	112.40	3,080
Semiprocessed	61.57	79.26	118.66	147.47	3,949
High-value unprocessed	51.96	68.40	94.55	112.90	1,164
Dairy:					
Highly processed	60.39	78.08	103.38	104.95	13,385
Semiprocessed	53.50	86.82	138.61	177.79	630
Corn and sorghum:					
Semiprocessed	46.83	74.16	106.55	111.93	883
Low-value unprocessed	53.80	82.47	94.67	76.82	15,325
Wheat:					
Highly processed	56.02	78.30	122.25	152.29	1,907
Semiprocessed	65.74	84.30	98.73	89.13	2,750
Low-value unprocessed	66.36	76.78	109.21	97.88	19,745
Rice:					
Semiprocessed	63.74	75.12	94.14	91.93	5,337
Low-value unprocessed	209.21	172.54	176.89	359.75	85
Fruits:					
Highly processed	74.32	87.89	111.59	121.97	6,156
High-value unprocessed	84.69	95.31	104.47	119.28	9,392
Low-value unprocessed	65.36	88.85	133.19	176.32	141
Sugar:					
Highly processed	84.40	100.82	108.92	126.06	2,141
Semiprocessed	79.80	90.84	104.16	100.77	20,294
Low-value unprocessed	95.92	137.49	142.66	156.12	16
Tobacco:					
Highly processed	56.90	84.07	105.57	111.51	5,054
High-value unprocessed	88.60	98.68	102.57	95.67	4,544
Fodders, hay, and other feedstuffs:					
Semiprocessed	57.84	76.72	350.29	751.19	5,773
Low-value byproducts	55.72	81.72	119.39	133.39	2,234

[1]For details on countries, regions and economic development groups, see *Value-Weighted Quantity Indices of Exports for High-Value Processed Agricultural Products*, U.S. Dept. Agr., Econ. Res. Serv. (SB-827, Aug. 1991).

World Agriculture Trends and Indicators

Trends in agricultural production and productivity, economic growth, consumption, and agricultural trade are published for 142 countries, 14 regions, and the European Community.

World Agriculture Trends and Indicators provides reliable, comparable, and up-to-date information on world regions and individual country economies and agriculture. The trends and indicators include comprehensive information on economic growth, agricultural production and productivity, resource and input use efficiency, consumption, and agricultural trade.

Concepts, Methods, and Data

World Agriculture Trends and Indicators includes information on aggregate growth for the world, geographic regions, and individual countries on population, GDP, total agricultural production, and production of principal crop and livestock products. It also includes trade prices, input use and prices, agricultural trade, external debts, and stocks. Detailed country-level data cover principal macroeconomic indicators, consumption indicators, factors of production, agricultural production indexes, as well as area, yields, and production of principal crops and livestock products, and total and disaggregated agricultural trade.

The 1990 issue contains country data for 142 countries, 14 geographic regions, and the European Community (EC) and accounts for nearly all of the world population, agricultural production, and trade. With few exceptions, the data include countries with populations of 500,000 or more. Presentation formats differ for countries, regions, and the world.

Underlying *World Agriculture Trends and Indicators* are data from ERS and USDA's Foreign Agricultural Service, the Bureau of the Census, the World Bank, the International Monetary Fund, and the FAO and other United Nations sources. Statistical series from sources other than USDA are reprinted without adjustment and may differ from related data published by USDA.

The series were selected because of their consistency over time and comparability across countries. The GDP estimates, which are expressed in current U.S. dollars, are generally from the World Bank. GDP estimates have not been available for the former Soviet Union or the eight central European countries. Therefore, GDP data for those countries, expressed in constant dollars, were taken from private sector sources. Such data were used because the World Bank data cover only member countries. Some information published by the FAO and the World Bank is repeated to provide a more comprehensive picture of world agriculture.

World, regional, and country indicators generally use similar definitions. Definitions are provided in *World Agriculture Trends and Indicators 1970–89* (SB-815, September 1990).

Publications and Availability

World Agriculture Trends and Indicators was first published in 1989 for 1970–88. Published data are reported at 5-year intervals, beginning with 1970, and annually for the most recent 3 years of available data.

An electronic database includes complete annual series, beginning with 1961. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog. The same electronic information is available in the "view" form, which provides graphic representation of all statistical series included in the compendium. The user can fit four linear trends or a bar chart to any series, and each trend line shows associated statistical information.

Contacts: Francis Urban or Ray Nightingale, Markets and Competition Branch, Agriculture and Trade Analysis Division (202–219–0705).

Sample table--Agriculture trends and indicators for Brazil, 1987–91, selected years[1]

Item	Unit	1987	1988	1989	1990	1991
Macroeconomic indicators:						
Population	Million	143.9	146.8	149.6	152.5	155.4
Rate of growth	Percent per year	2.0	1.9	1.9	1.8	1.8
Agriculture population	Percent	25.8	25.2	--	--	--
GNP per capita	Dollars per person	1,960	21,120	2,500	2,710	--
GDP in agriculture	Percent	8.0	7.9	--	--	--
Total debt	Million dollars	123,668	115,666	111,310	116,173	--
Consumption indicators:						
Per capita utilization, cereals	Kg/year	272	283	280	--	--
Calorie intake/person/day	Calories	2,701	2,778	2,750	2,723	--
Factors of production:						
Total land	1,000 ha	851,197	851,197	851,197	--	--
Arable and permanent cropland	1,000 ha	77,500	78,550	78,650	--	--
Production, indexes (1979-81 = 100):						
Total agriculture	Index	165.94	162.20	162.16	163.36	163.74
Crop production	Index	166.24	161.27	160.52	160.54	160.81
Production:						
Cereals--total	1,000 MT	44,112	42,921	43,943	32,468	35,991
Wheat	1,000 MT	6,035	5,738	5,553	3,094	3,077
Rice, paddy	1,000 MT	10,419	11,809	11,044	7,419	9,503
Corn (maize)	1,000 MT	26,803	24,748	26,573	21,339	22,604
Soybeans	1,000 MT	16,969	18,016	24,071	19,888	14,771
Yields, selected crops:						
Wheat	Kg/ha	1,745	1,655	1,692	1,154	1,423
Rice, paddy	Kg/ha	1,742	1,982	2,104	1,881	2,294
Corn (maize)	Kg/ha	1,985	1,879	2,055	1,874	1,901
Soybeans	Kg/ha	1,858	1,713	1,971	1,732	1,552
Trade:						
Self-sufficiency ratio--cereals	Percent	101	96	88	--	--
Value of total exports	Million dollars	26,210	33,773	34,403	30,953	--
Value of total imports	Million dollars	16,581	16,055	20,022	22,459	--

-- = Not available.

[1]Data for other countries and years are available as are additional data items. See *World Agriculture Trends and Indicators, 1970–91*, U.S. Dept. Agr., Econ. Res. Serv., forthcoming.

The World Economy and Exchange Rates

ERS tracks changes in measures of GDP, consumer prices, merchandise trade, and exchange rates for the world economy.

ERS analysts follow and report on economic events in the world economy, including the economic strength of industrialized and developing countries. Analysts are especially concerned with patterns related to the outlook for total trade, including agricultural products. Prices are reported for major agricultural and nonagricultural commodities. Statistics are maintained on exchange rates, along with indexes of normal and real trade-weighted dollar exchange rates.

Concepts, Methods, and Data

ERS publishes estimates of foreign economic growth, inflation, and export earnings. Historical data and projections for GDP, GDP price deflators, and real exports of goods and nonfinancial services are covered. Information on terms-of-trade, capacity to import, and real effective (trade-weighted) exchange rates is available beginning with 1960; quarterly and monthly data begin with 1970. These macroeconomic indicators are deemed important in understanding world trade trends and patterns.

The annual time series generally begin with 1970. Real GDP growth rates are calculated in constant U.S. dollars when possible. Growth rate indicators are expressed as indexes with 1987 as the base year. Data are mainly from the World Bank and the International Monetary Fund (IMF).

Indicators for regions or country groupings are calculated from weighted averages using each country's real GDP as the weight. Indicators are prepared for subregions or other subgroups of countries. Forecast assumptions are based on several sources, including DRI/McGraw-Hill, Project Link of the United Nations, Oxford Economic Forecasting, and the IMF's *World Economic Outlook.*

Estimates of the value of the U.S. dollar are important because exports generally vary inversely with the value of the dollar. When the dollar rises, individuals in other countries must give up more of their country's money to obtain a constant amount of U.S. currency.

The more currencies considered at one time, the more difficult it is to calculate the value of the dollar. To be useful, the exchange rate indicator should show changes in the overall value of the dollar during any one time period. Thus, weighted-average exchange rate indexes are constructed. The weighted-average exchange rates are adjusted to account for differences in related rates of inflation among the countries.

Publications and Availability

Estimates of annual percentage changes in GDP, consumer prices, and merchandise exports are published in each issue of *Agricultural Outlook.* Separate estimates are provided for the world (less the United States), developing countries, and for major geographic regions.

Recent monthly indexes of the real trade-weighted dollar exchange rates are also published in *Agricultural Outlook.* The published agricultural trade indexes include commodity detail for the United States and its competitors. A Federal Reserve Board index for all U.S. trade is also published for comparison. The Federal Reserve Board index represents 10 major currencies other than the U.S. dollar. For a discussion of the calculations and weights used in the indexes of real trade-weighted dollar exchange rates, see *Agricultural Outlook*, October 1988.

Monthly, quarterly, and annual real exchange rates are available in electronic form for 63 countries. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contacts: Timothy Baxter or Andy Jerardo, Markets and Competition Branch, Agriculture and Trade Analysis Division (202-219-0705).

Sample table--Foreign economic growth, inflation, and exports, 1989-93

Item	1989	1990	1991 E	1992 F	1993 F	Average 1981-90
			Annual percent change			
World, less United States:						
Real GDP	3.2	2.2	-0.7	0.6	2.9	2.7
GDP deflator	12.0	42.1	24.0	53.0	41.0	12.1
Real exports	7.0	4.4	-0.8	2.1	4.7	4.7
Developed, less United States:						
Real GDP	3.6	3.3	1.9	1.6	2.9	2.9
GDP deflator	4.7	3.5	4.4	4.0	3.4	5.0
Real exports	9.7	7.8	4.0	2.3	4.9	5.7
Eastern Europe and C.I.S.:						
Real GDP	1.0	-3.0	-16.2	-12.2	-1.8	1.3
GDP deflator[1]	26.2	185.9	72.9	134.0	69.6	27.2
Real exports	-5.9	-10.2	-31.8	-3.5	0.5	1.0
Developing:						
Real GDP	3.5	2.7	3.2	5.2	5.2	3.4
GDP deflator	19.5	17.7	11.6	12.6	12.7	29.1
Real exports	8.8	5.2	3.4	4.6	6.0	4.8
Asia:						
Real GDP	5.3	5.6	5.8	5.5	5.7	6.8
GDP deflator	6.1	8.3	8.5	8.4	7.4	6.7
Real exports	8.2	6.5	7.0	8.0	8.9	9.1
Latin America:						
Real GDP	1.3	-0.1	2.8	2.7	4.2	1.2
GDP deflator[2]	37.0	32.1	16.5	18.0	17.5	46.4
Real exports	10.4	3.8	-1.5	2.1	5.2	5.2
Africa:						
Real GDP	3.1	1.4	1.8	2.9	3.1	1.7
GDP deflator	19.4	15.1	17.7	13.2	10.8	14.3
Real exports	5.0	8.5	2.9	1.6	2.8	-1.9
Middle East:						
Real GDP	2.5	-0.3	-3.7	11.4	7.5	0.7
GDP deflator	12.8	19.3	-2.4	10.3	14.3	8.1
Real exports	21.0	4.3	1.7	9.3	33.7	0.0

E = Estimate.
F = Forecast.
[1]Excludes Yugoslavia, beginning in 1989.
[2]Excludes Argentina, Brazil, and Peru, beginning in 1989.

Sample table--Indexes of real trade-weighted dollar exchange rates, 1992[1]

Item	Jan. P	Feb. P	Mar. P	Apr. P	May P	June P
				1985 = 100		
Total U.S. trade[2]	62.4	63.7	65.6	65.1	64.0	64.0
Agricultural trade:						
U.S. markets	75.5	76.2	78.2	78.0	77.0	77.0
U.S. competitors	76.1	76.6	76.8	76.0	75.3	75.3
Wheat:						
U.S. markets	95.4	95.9	100.4	100.4	100.0	100.7
U.S. competitors	70.1	71.2	71.6	71.0	71.2	71.5
Soybeans:						
U.S. markets	63.2	63.8	65.9	65.7	64.4	64.4
U.S. competitors	57.4	57.6	58.0	57.0	56.1	56.1
Corn:						
U.S. markets	68.4	69.2	70.7	70.6	69.2	69.0
U.S. competitors	60.0	60.6	61.1	60.3	59.7	59.5
Cotton:						
U.S. markets	71.7	72.4	74.1	73.9	73.1	73.2
U.S. competitors	95.9	95.6	95.4	94.8	94.4	94.2

P = preliminary.
[1]Real indexes adjust nominal exchange rates for differences in rates of inflation to avoid the distortion caused by high-inflation countries. A higher value means the dollar has appreciated. See the October 1988 issue of *Agricultural Outlook* for a discussion of the calculations and the weights used.
[2]Federal Reserve Board Index of trade-weighted value of the U.S. dollar against 10 major currencies. Weights are based on relative importance in world financial markets.

World Trade in Selected Agricultural Commodities

Nearly three decades of statistics are available on world agricultural trade by country, origin, destination, and commodity.

ERS compiles statistics on the volume of world trade in selected agricultural commodities that account for 30 percent of world agricultural trade and are of major interest to the United States. Databases for world trade in 30 commodities--grains, oilseeds, oils, meals, sugar, and cotton--have been compiled for 29 years (1962-90). These data make possible analyses of changes in world trade patterns, market shares, major exporters, import markets, and effects of trade policies on the direction and flow of goods between countries. Such analyses were not possible earlier because of the lack of complete world trade data.

Concepts, Methods, and Data

The primary source for world trade in selected agricultural commodities is the commodity trade statistics of the United Nations (UN). This source is limited to countries that report their trade statistics to the UN (about 100-110 countries in 1962-90). When import data for some countries were not available from the UN, they were obtained from official trade yearbooks of those countries. Estimates for some countries that have not reported their trade statistics were obtained from export data of their trading partners.

ERS used the square matrix method to build a world trade system for selected agricultural commodities. This method requires the tabulation of trade in each commodity for each country by country of origin for imports and country of destination for exports. Each year represents a complete world trade picture of the trade flows between countries for each commodity.

Publications and Availability

World Food Grain Trade, 1962-83 was first published in 1985. *World Feed Grain Trade, 1962-80* was published in 1987. *World Oilseed and Products Trade, 1962-88* was published in 1991. Published data for each commodity are presented in condensed 5-year average trade matrices for 17 major importing regions and 6 major exporters during the specified time periods.

Electronic databases contained in these reports are available for individual countries in compressed Lotus 1-2-3 worksheet files on DOS-compatible 3.5", 1.44 MB diskettes. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contacts: Ed Overton, Office of Director (202-219-0700), or Samuel Calhoun, Markets and Competition Branch, Agriculture and Trade Analysis Division (202-219-0705).

Sample table--World soybean imports, 1986[1]

Importing countries and regions	Major exporters							
	United States	Argentina	Brazil	China (PRC)	Paraguay	EC-10	Other exporters	Total imports
	1,000 metric tons							
North America	148.0	0	0	0	0	0	18.0	166.0
Canada	148.0	0	0	0	0	0	.1	148.1
EC-10	7,200.6	1,471.6	808.5	4.0	164.9	221.1	38.3	9,909.0
Belgium-Lux.	954.8	249.9	82.1	0	77.2	22.7	5.0	1,391.7
Germany, Fed. Rep.	2,163.0	596.5	335.1	4.0	25.6	0	5.9	3,090.1
Italy	809.8	295.3	152.5	0	2.0	0	10.5	1,270.1
Netherlands	2,123.0	319.7	192.2	0	54.9	3.1	12.0	2,745.2
Other W. Europe	2,647.2	523.7	309.8	0	180.9	4.4	11.0	3,677.0
Spain	1,820.7	200.5	210.7	0	154.3	.2	3.0	2,389.4
East Europe	1,988.2	201.9	49.0	482.9	18.8	0	13.4	2,754.2
Oceania	0	0	0	0	0	0	.1	.1
West Asia	534.1	0	0	.2	0	7.8	24.8	566.9
Central America	796.1	44.4	2.3	13.0	0	0	0	855.8
West Africa	0	0	7.3	0		0	0	7.3
North Africa	62.4	0	0	0	0	.3	13.0	75.7
Southern Africa	0	0	0	0	0	0	.5	.5
South Asia	.3	0	0	0	0	0	.9	1.2
East Asia	7,144.3	102.9	141.3	400.7	56.7	0	82.6	7,928.5
Japan	4,331.6	0	128.1	323.1	7.7	0	26.7	4,817.2
Southeast Asia	64.8	36.4	0	462.0	0	0	99.1	662.3
Caribbean	98.1	10.0	0	6.5	5.7	0	0	120.3
South America	451.3	3.0	3.9	0	12.0	0	3.4	473.6
Total exports	21,135.4	2,393.9	1,322.1	1,369.3	439.0	233.6	305.1	27,198.4

[1]Similar data are available for other commodities, countries, and years.

Agricultural Land Values and Real Estate Transfers

Farm real estate value estimates show average per-acre values and total values by State.

The farm real estate value statistics published by ERS show average value per acre for individual States and for the 48 contiguous States combined. Characteristics of farmland buyers and sellers, and information on land transactions and financing, are prepared and published for the 10 farm production regions.

The value of farmland and buildings accounts for about three-fourths of the value of all farm assets. Changes in farmland values are used in constructing the balance sheet of the farming sector, in analyzing well-being of the sector, in adjusting cash rental agreements, for appraisal work, and for various other purposes.

Concepts, Methods, and Data

The farm real estate value series includes estimates of average per-acre value of land, total value of land and buildings, and the total value of farm buildings, excluding land. The average value of land and buildings per farm, by State, is also included.

The State average dollar-value-per-acre series is benchmarked on the census of agriculture every 5 years. Thus, the values published by ERS for years following the census of agriculture are the census estimates. Between census years, percentage changes in value are calculated from USDA's Agricultural Land Value Survey, and these annual percentage changes are used to update the land value estimates from the preceding year.

To obtain the total value of all farmland and buildings by States in noncensus years, ERS analysts use the average dollar-per-acre estimates for each State, multiplied by the total acres of land in farms, as estimated by NASS.

The average value-per-acre series is the total value of farm real estate, divided by the number of farms, as estimated by NASS.

The total value of farm buildings is estimated for each State by multiplying the total value of land and buildings by the proportion that farm buildings represent of the total value of land and buildings. The buildings-to-land and building-value ratio is based on the most recent land and building value estimates from the Bureau of the Census. Between benchmarks, real estate value is allocated to land and buildings. The allocation procedure incorporates the relationship between land and building values as driven by the long-term inflation rate.

Data on farmland transactions and buyer and seller characteristics are based on reports of sales. The transaction details from the annual Farm Land Market Survey include total sale price, total acres, amount of debt incurred, type of credit (if any), type of credit instrument (contract, mortgage), holders of primary and secondary liens, and interest rates on seller-financed transactions. Characteristics include tenure of the buyer and seller, tenure of persons farming the land before and after sale, and probable use of the property 5 years later. Summary tables are published for farm production regions and for the 48 contiguous States.

Publications and Availability

The farm real estate value estimates are released each April in *Agricultural Resources: Agricultural Land Values, Situation and Outlook Summary*. The data are then published in early summer along with additional data and analyses in *Agricultural Resources: Agricultural Land Values and Markets Situation and Outlook Report.* A more detailed description of the agricultural land values statistics is available in *Major Statistical Series of the U.S. Department of Agriculture*: *Land Values and Land Use* (AH-671, Vol. 6, August 1988). Handbook users should note that the land value indexes described there are no longer published.

Information on farm real estate values is available in electronic form. For example, the U.S. and State data on value of land and buildings per acre and per farm are available beginning with 1950. Series on county and State per-acre values as reported from the census of agriculture begin with 1850. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contact: Roger Hexem, Land and Capital Assets Branch, Resources and Technology Division (202-219-0422).

Sample table--Farm real estate values, by State, 1990-91[1]

Region and State		Total value of land and buildings		Total value of farm buildings		Average value of land and buildings per acre	
		1991	1992	1991	1992	1991	1992
		Million dollars				*Dollars*	
Northeast	Maine	1,389	1,322	373	356	715	680
	New Hampshire	1,031	982	277	264	1,570	1,494
	Vermont	1,724	1,642	465	442	834	794
	Massachusetts	2,456	2,338	662	630	2,639	2,513
	Rhode Island	319	303	86	82	3,527	3,358
	Connecticut	1,781	1,695	480	457	3,098	2,950
	New York	8,557	8,723	2,747	2,831	700	710
	New Jersey	4,323	4,201	834	811	3,964	3,852
	Pennsylvania	14,232	14,744	4,285	4,485	1,228	1,267
	Delaware	1,281	1,212	330	316	1,669	1,572
	Maryland	4,941	5,073	1,211	1,258	1,658	1,696
Lake States	Michigan	11,718	11,937	3,186	3,281	790	801
	Wisconsin	14,928	15,221	5,180	5,354	557	564
	Minnesota	26,190	26,203	5,760	5,842	681	679
Corn Belt	Ohio	19,107	19,616	4,726	4,917	916	936
	Indiana	20,400	20,843	4,240	4,385	1,010	1,029
	Illinois	40,841	42,760	4,959	5,273	1,259	1,315
	Iowa	38,760	39,473	5,662	5,858	988	1,003
	Missouri	20,946	20,958	4,378	4,446	545	543
Northern Plains	North Dakota	14,867	14,477	1,697	1,661	326	317
	South Dakota	15,514	16,113	2,298	2,442	299	309
	Nebraska	26,188	26,790	3,203	3,331	488	498
	Kansas	22,369	23,179	2,992	3,056	406	420
Appalachia	Virginia	11,396	11,998	3,106	3,306	942	988
	West Virginia	2,313	2,659	677	787	442	506
	North Carolina	11,933	12,136	2,938	3,021	937	949
	Kentucky	13,564	13,998	3,892	4,064	686	705
	Tennessee	12,251	12,219	3,261	3,286	725	720
Southeast	South Carolina	4,835	4,747	1,122	1,116	728	712
	Georgia	12,040	10,917	2,940	2,704	752	679
	Florida	22,397	21,648	2,562	2,513	1,889	1,822
	Alabama	7,752	8,153	2,009	2,137	586	614
Delta States	Mississippi	9,651	9,441	1,984	1,965	599	584
	Arkansas	11,935	11,219	2,325	2,207	620	581
	Louisiana	7,964	7,961	1,329	1,344	754	752
Southern Plains	Oklahoma	16,038	16,296	2,970	3,055	396	401
	Texas	63,011	61,066	8,777	8,649	414	400
Mountain	Montana	14,653	15,202	2,171	2,265	207	215
	Idaho	8,897	9,272	1,580	1,675	542	563
	Wyoming	5,324	4,819	766	700	131	118
	Colorado	13,448	12,043	2,230	2,026	342	305
	New Mexico	10,189	10,582	1,019	1,075	207	215
	Arizona	10,260	10,879	828	891	262	277
	Utah	4554	4,801	836	890	329	346
	Nevada	1,949	2,057	454	485	168	177
Pacific	Washington	12,768	12,672	2,528	2,538	640	633
	Oregon	10,377	10,737	2,528	2,660	441	454
	California	54,146	53,469	8,242	8,242	1,515	1,493
48 States		667,504	670,798	123,032	125,378	556	557

[1]As of January 1.

Agricultural Production and Efficiency

ERS compiles measures of use of farm inputs, outputs, and farm productivity for 10 U.S. farm production regions and the Nation.

Measures of inputs, outputs, and productivity for U.S. agriculture are prepared for each of 10 regions, as well as for the Nation.

Estimates of inputs, outputs, and productivity can aid in understanding sources of economic growth and in targeting research with the goal of further productivity gains. Such estimates show input-output relationships, including those concerned with technological advances and intersectoral performance.

Concepts, Methods, and Data

ERS's most cited measure of productivity is a Laspeyres multifactor productivity index. It is obtained by dividing the index of total farm output by the aggregate input index. The index of farm output measures annual changes in crop and livestock production available for human consumption. The index of total farm inputs measures annual changes in the volume of resources used in farm production.

The index of farm output measures output in the year production occurs, although some of the production may be marketed in later years. Besides an overall farm output index, distinct indexes for total crop and livestock production are constructed, along with indexes for 11 crops and 4 livestock commodity groups. Producer goods are excluded to avoid double counting.

Weighted-average prices received by farmers within regions are used to construct regional indexes, and U.S. indexes are computed by adding the quantity-price aggregates for the regions. NASS reports serve as the principal sources for commodity and price information used in construction of the production and efficiency indexes.

The general index of farm inputs is an aggregation of seven major input groups: farm labor; farm real estate; mechanical power and machinery; agricultural chemicals; feed, seed, and livestock purchases; taxes and interest; and miscellaneous inputs. Besides the general index, separate indexes are prepared for each of the seven input groups.

As a multifactor index, the input series includes all resources committed to agricultural use by farmers, but it excludes farm-produced goods that are used as inputs to further production. Quantities of inputs used are multiplied by weighted-average prices paid by farmers during the weight period, to arrive at price-quantity aggregates for regions. The regional price-quantity aggregates are summed to derive a national price-quantity aggregate. Weight periods differ by year to reflect changes in the production process. The price-quantity aggregates are spliced together to obtain a single time series with a common price base. Indexes are then calculated relative to a reference period.

ERS published new productivity series in *Production and Efficiency Statistics, 1989*. These new series are the Tornqvist indexes of input, output, and productivity. Adoption of Tornqvist indexes reflects improved statistical practice. In addition, measurement of individual commodities and inputs has been improved. These changes achieve consistency with methods used to compile measures of productivity for the general economy.

Publications and Availability

ERS publishes annual time series reflecting changes in farm production, input use, and production efficiency for the United States and by region in *Economic Indicators of the Farm Sector: Production and Efficiency Statistics.* Preliminary estimates are published in *Agricultural Outlook.*

A more detailed description of the production and efficiency estimates is available in *Major Statistical Series of the U.S. Department of Agriculture: Agricultural Production and Efficiency* (AH-671, Vol. 2, October 1989).

U.S. and regional indexes of farm input use, output, and productivity by farm production regions are available electronically. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contact: V. Eldon Ball, Resource Indicators Branch, Resources and Technology Division (202-219-0432).

Sample table--Tornqvist indexes of farm inputs, outputs, and productivity, United States, 1948-89[1]

Year	Output	Input	Productivity[2]	Year	Output	Input	Productivity[2]
			(1982=100)				
1948	48	75	64	1973	82	90	90
1949	46	74	62	1974	77	95	81
1950	46	77	60	1975	82	95	87
1951	49	81	61	1976	82	97	85
1952	51	82	62	1977	88	95	93
1953	51	83	62	1978	88	101	87
1954	52	81	64	1979	94	104	91
1955	54	86	63	1980	91	104	87
1956	54	87	63	1981	101	102	99
1957	54	87	62	1982	100	100	100
1958	56	87	65	1983	83	98	85
1959	58	90	65	1984	102	99	103
1960	60	91	66	1985	107	96	111
1961	61	89	69	1986	103	93	110
1962	62	89	70	1987	104	92	114
1963	65	89	72	1988	97	89	109
1964	64	88	72	1989 p	108	92	117
1965	67	89	76				
1966	66	88	75				
1967	70	89	78				
1968	69	91	77				
1969	72	92	78				
1970	70	91	76				
1971	77	92	83				
1972	77	91	85				

p = Preliminary.

[1]Tornqvist indexes are available for major subgroups of livestock and livestock products, crops, and inputs.

[2]Data computed from unrounded index numbers.

Cash Rents and Grazing Rates

Published statistics on cash rents and grazing rates reflect returns to farmland.

ERS publishes annual statistics on cash rents per acre for whole farms, cropland, and pastureland. Rents are closely related to farmland values because they reflect returns to land. Rents also serve as components in cost and return budgets for farm enterprises.

In addition to the series on cash rents per acre, estimates of cattle grazing rates are made for privately owned nonirrigated land in 17 Western States.

Concepts, Methods, and Data

The three series on cash rents for whole farms, cropland, and pastureland are published for selected Eastern States. For some Western States, separate cash-rent series are published for pasture and for irrigated and nonirrigated cropland. Cash-rent estimates are not published for whole farms rented for cash in all States.

The farmland cash-rent data are estimated from the Agricultural Land Values Survey, an annual opinion survey sent to about 28,000 farmers and ranchers. Stratification is used to reduce the variance due to urbanization. Survey respondents are asked to report average cash rents for their counties. They are also asked to estimate the value of the corresponding type of cash-rented land. Grazing fees are computed by NASS on an animal-unit-month basis using data from the annual June Agricultural Survey. In the survey, farm operators in the 17 Western States report grazing fees paid on specified tracts. Analysts compute rent-to-value estimates using the cash-rent estimates and the land-value estimates.

Publications and Availability

Annual estimates of cash rents and grazing rates are released each April in *Agricultural Resources: Agricultural Land Values, Situation and Outlook Summary*. The data are then published in greater detail in ERS's *Agricultural Resources: Agricultural Land Values and Markets, Situation and Outlook Report*, June issue. To provide longer rent series, ERS also published *Cash Rents for Farms, Cropland, and Pasture, 1960-89* (SB-813, October 1990).

An electronic database on cash rents and grazing rates is available. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contacts: John Jones and Roger Hexem, Land and Capital Assets Branch, Resources and Technology Division (202-219-0422).

Sample table--Illinois: Average gross cash rents and share of rent to value of rented land, by type of land[1]

Year	Rent per acre			Rent to value[2]		
	Farms	Cropland	Pasture	Farms	Cropland	Pasture
	Dollars			*Percent*		
1982	112.80	119.40	33.70	5.0	5.0	3.4
1983	111.40	116.30	42.60	5.6	5.6	4.7
1984	120.00	119.30	39.20	5.9	5.8	4.8
1985	103.80	110.10	34.30	7.1	7.2	5.8
1986	100.10	99.90	31.90	7.8	7.7	6.2
1987	86.10	85.70	27.70	7.6	7.6	6.1
1988	83.20	89.20	28.60	6.8	7.1	6.3
1989	87.10	94.30	32.80	6.3	6.5	6.0
1990	98.20	99.40	33.20	6.7	6.7	6.1
1991	100.00	100.90	33.50	6.7	6.6	6.0

[1]Similar data are available for other States. For several Western States, separate estimates are prepared for irrigated and nonirrigated cropland.
[2]Rent as a percentage of per-acre value of rented land.

Sample table--Cattle grazing rates on privately owned nonirrigated land, 1986-90

State	1986	1987	1988	1989	1990
			Dollars per animal-unit-month[1]		
Northern Plains:					
North Dakota	7.63	7.41	7.67	8.26	8.52
South Dakota	9.19	8.61	9.98	10.65	12.53
Nebraska	9.75	10.29	10.40	13.13	15.78
Kansas	8.17	8.87	9.42	10.13	10.58
Southern Plains:					
Oklahoma	5.08	5.68	6.09	9.94	4.31*
Texas	8.79	8.30	8.06	9.37	7.61*
Mountain:					
Montana	8.30	7.94	9.79	9.61	9.61
Idaho	7.51	6.60	6.99	6.93	8.42
Wyoming	8.31	6.31	8.93	10.06	9.64
Colorado	8.28	8.27	8.43	8.39	10.20
New Mexico	5.98	5.82	5.46*	7.51	6.66
Arizona	5.82	7.19	4.47*	3.92*	[d]
Utah	5.34	5.98	8.70	9.06	7.79
Nevada	2.95	7.31	[d]	4.18*	[d]
Pacific:					
Washington	9.77	9.55	7.28*	7.94	7.82
Oregon	7.69	5.91	7.03*	7.40	8.28
California	7.93	8.46	9.43*	10.72	9.81*
16-State average[2]	8.33	8.09	8.98	10.06	10.86

[1]Includes cow-calf rates converted to animal-unit-month.
[2]Includes all States except Texas.
[d] = Insufficient data for an accurate measure of grazing rates.
* = Coefficient of variation exceeds 25 percent.
Source: USDA, NASS, *Agricultural Prices*. Dec. 1990 and earlier issues.

Farm Inputs and Cropping Practices

ERS publishes statistics on the supply, demand, and prices of inputs and on cropping practices in major producing States.

ERS analysts compute and publish indicators on the supply, demand, and price of farm production inputs. Because of differences in these inputs and in their importance in the production process, the statistics vary considerably in the way they are collected, tabulated, and published.

Statistics on the supply and prices for major inputs such as fuels, machinery, fertilizers, pesticides, and irrigation water are of particular interest to farm producers. Agricultural producers also follow interest rates, or the cost of borrowed money. Items of concern related to the land used are rents, values, and landownership costs.

Both farmers and input suppliers pay special attention to factors that can affect the availability and prices for inputs that are imported or exported. Farm inputs and cropping practices data are used to monitor production changes due to changes in agricultural policies.

Concepts, Methods, and Data

Data concerning farm inputs come from many sources. For example, estimates of petroleum supplies and consumption come from the U.S. Department of Energy. Fuel prices and energy expenditures data are based on NASS surveys.

Tractor and farm machinery unit-sales data are obtained from the Equipment Manufacturers Institute, but estimates of expenditures for such items are from the ERS-NASS Farm Costs and Returns Survey. U.S. International Trade Commission estimates are used for international trade in farm machinery.

Fertilizer supplies and use are monitored. Data on supplies are mainly from U.S. Department of Commerce estimates. Fertilizer use on major crops is estimated by ERS, based on NASS surveys of application rates and crop acreage. Total consumption is based on the Tennessee Valley Authority (TVA) data on State consumption, submitted by State fertilizer regulatory officials and published annually by TVA's National Fertilizer and Environmental Research Center. Imports and exports of fertilizer ingredients are from USDC estimates.

Estimates of pesticide use on major field crops are based on NASS surveys. NASS gathers price data from dealers. Irrigated acreage and water-use estimates are mainly from the census of agriculture and related surveys. Other information sources on irrigation and water transfer and use include State agencies and the Bureau of Reclamation, U.S. Department of the Interior.

Tillage systems used in production of major crops are derived from data from the ERS-NASS Cropping Practices Survey.

ERS uses NASS data to monitor seed and plant supplies and prices. Exports and imports of seeds and plants are followed because of their potential effects on U.S. supplies and prices.

Publications and Availability

Situation and outlook information on the supply, demand, and price of major farm inputs is published in *Agricultural Resources: Inputs Situation and Outlook Report*, an ERS report. ERS analysts published the report *Seven Farm Input Industries* (AER-635, September 1990), which describes industries that provide fertilizer, pesticides, energy, feed, credit, and farm machinery. The provision of hired labor for farm use is also discussed. The report explains how these industries relate to U.S. agriculture and suggest possible directions of future changes. Another report of potential interest is *Agricultural Pesticide Use Trends and Policy Issues* (AER-622, September 1989). ERS also includes special articles on farm inputs in *Agricultural Outlook*. Prices paid by farmers for major inputs are published annually in the *Agriculture Prices Summary* by NASS.

Contacts: Len Bull, Stan Daberkow, Mohinder Gill, and Harold Taylor, Agricultural Inputs and Production Systems Branch, Resources and Technology Division (202-219-0464).

Sample table--Tillage systems and herbicide treatments used in corn production, 1991[1]

Category	IL	IN	IA	MI	MN	MO	NE	OH	SD	WI	Area
						1,000 acres[2]					
Planted acres	11,300	5,800	12,200	2,600	6,600	2,200	8,300	3,800	3,750	3,800	60,350
						Percent of acres					
Tillage system:											
Conventional with moldboard plow	6	17	8	29	25	13	4	31	11	41	15
Conventional without moldboard plow	67	57	57	44	58	60	45	40	69	43	55
Mulch-till	15	15	29	18	14	18	28	11	17	15	20
No-till	12	11	6	9	3	9	23	18	3	1	10
						1,000 acres					
Acres treated with herbicides	11,085	5,619	11,902	2,436	6,347	2,109	7,614	3,618	3,343	3,484	57,556
						Percent of acres					
Any treatment	98	97	98	94	96	96	92	95	89	92	95
1 treatment	59	77	55	75	51	76	66	69	57	68	62
2 treatments	38	18	41	18	41	16	24	24	29	23	31
3 or more treatments	1	2	2	1	4	4	2	2	3	1	2
						1,000 acres					
Total treated acres	15,641	6,895	17,289	2,963	9,582	2,640	10,005	4,659	4,703	4,411	78,788

[1]Similar information is available for soybeans, wheat, cotton, rice, and potatoes. States surveyed vary by crop and year.
[2]Preliminary.

Sample table--Corn for grain seeding rates, plant population, seed cost per acre, and fertilizer use, 1991[1]

States[2]	Acres planted[3]	Seed rate per acre	Plant population per acre	Seed cost per acre	Acres receiving: Any fertilizer	N	P205	K20	Application rates N	P205	K20
	Thousand	*Kernels*	*Number*	*Dollars*	*Percent*				*Pounds/acre*		
Illinois	11,300	25,511	23,700	21.09	99	99	87	85	159	79	104
Indiana	5,800	25,027	22,400	20.26	99	98	94	86	135	78	112
Iowa	12,200	25,285	22,800	21.62	98	98	79	77	120	58	68
Michigan	2,600	24,279	21,800	20.49	97	97	89	90	124	63	95
Minnesota	6,600	26,602	23,900	22.98	97	97	85	83	110	50	63
Missouri	2,200	22,575	19,900	19.87	98	97	76	79	136	54	72
Nebraska	8,300	24,501	22,200	20.21	99	99	64	29	135	36	20
Nonirrigated	2,747	18,648	NR	15.64	97	97	51	21	89	39	18
Irrigated	5,553	27,397	NR	22.47	99	99	71	33	158	35	21
Ohio	3,800	26,442	23,200	22.51	98	98	94	91	151	75	103
South Dakota	3,750	19,111	17,500	16.03	83	83	67	26	71	36	22
Wisconsin	3,800	25,611	23,400	19.16	96	95	93	93	86	44	69
1991 average	60,350[4]	24,906	22,080	20.79	97	97	82	73	128	60	81

NR = Not reported.
[1]Similar information is available for soybeans, wheat, cotton, rice, and potatoes. States surveyed vary by crop and year.
[2]States that accounted for 80 percent of U.S. corn acres planted in 1991.
[3]Preliminary for 1991.
[4]Total 10 States.

Farm Real Estate Taxes

Annual statistics show taxes levied per acre, relative to market value, and the total farm real estate tax, by State.

A farm real estate tax series dating from 1890 provides national and State-level data on total farm real estate taxes per acre. Series on taxes per acre and per $100 of full-market value date from 1909.

Farm real estate taxes affect farmers' incomes, property values, and communities. Information on real estate taxes is crucial in analyzing State and local financing of facilities and services, including roads, schools, and police and fire protection.

Concepts, Methods, and Data

The tax data provide estimates of ad valorem taxes imposed by State and local governments on farm and ranch lands and related improvements. Taxes related to special assessments for such purposes as drainage, irrigation, and weed control are not included.

The estimates are for taxes levied rather than taxes paid. Payments do not necessarily correspond with payment due dates because of possible delinquencies in payment. Real estate taxes are an annual lien on the property, due by a certain date. Unless payment is made, the property is subject to tax sale. However, the sale may be some years later, and during that time the taxpayer can pay the taxes and redeem the property.

The tax data come from surveys of about 4,200 local tax officials. Data are requested for the current and the preceding year on size of tract and taxes levied. Taxing jurisdictions are asked to provide information for 10 randomly selected farm or ranch parcels in the jursidiction. These parcel samples become the basis for ERS estimates of farm real estate taxes.

The estimating procedure relies on census of agriculture estimates of acres in each farm acreage size category. To expand the tax survey data to State and national estimates, ERS uses census of agriculture data on farmland values and acres of land in farms. For noncensus years, these data are adjusted based on the percentage change of land in farms reported by NASS and by ERS's annual estimates of farm real estate values.

Variations in farm real estate taxes are partly due to the degree that States rely on such taxes as sources of local revenue, and the extent of tax relief that States provide for farm property.

Users of the farm real estate tax data should be aware that all 50 States have preferential tax assessment of farmland. That is, farmland is valued for property tax purposes according to its value in its current use rather than its potentially higher market value. Preferential assessment laws vary greatly among States but may be grouped into three broad categories: those providing for preferential assessment only; those providing for preferential assessment with deferred (or rollback) taxes that are imposed when the land is taken out of a qualifying use; and those providing for preferential assessment with restrictive agreements that impose a penalty (essentially a deferred tax) when the land is taken out of a qualifying use. These laws are not necessarily restricted to farmland. They may also encompass other land uses, such as open space and forests.

Publications and Availability

Data on farm real estate taxes are published annually in *Agricultural Resources: Agricultural Land Values and Markets Situation and Outlook Report.*

Contact: J. Peter DeBraal, Land and Capital Assets Branch, Resources and Technology Division (202-219-0425).

Sample table--Taxes levied on farm real estate, 1988-90

Region and State		Total taxes		Average tax per acre		Taxes per $100 of full market value	
		1989	1990	1989	1990	1989	1990
		------Million dollars-----		*----------Dollars----------*			
Northeast	Maine	11.6	12.4	8.74	9.52	0.86	0.55
	New Hampshire	7.9	8.7	18.96	21.13	.85	0.94
	Vermont	18.7	20.0	13.43	14.43	1.13	1.21
	Massachusetts	15.3	15.5	26.33	26.73	0.70	0.71
	Rhode Island	2.8	2.6	48.23	48.22	0.96	0.96
	Connecticut	9.7	10.2	24.76	26.08	0.56	0.59
	New York	147.6	152.5	18.30	19.11	1.79	1.96
	New Jersey	31.4	34.5	36.63	39.72	0.81	0.86
	Pennsylvania	123.0	129.6	16.18	17.05	0.86	0.94
	Delaware	0.8	1.0	1.45	1.70	0.07	0.08
	Maryland	21.9	22.3	9.81	10.01	0.40	0.41
Lake States	Michigan	325.8	334.6	32.31	33.18	3.29	3.30
	Wisconsin	272.7	281.1	16.58	17.18	1.96	2.14
	Minnesota	162.1	171.9	6.12	6.49	0.82	0.81
Corn Belt	Ohio	142.6	142.3	9.44	9.42	0.75	0.78
	Indiana	122.5	129.8	7.51	8.11	0.60	0.65
	Illinois	451.8	431.9	15.94	15.24	1.15	1.10
	Iowa	353.6	345.1	11.21	10.94	1.02	0.99
	Missouri	70.3	72.5	2.43	2.51	0.36	0.37
Northern Plains	North Dakota	79.8	84.7	2.13	2.27	20.65	0.67
	South Dakota	104.8	105.7	2.83	2.86	0.97	0.87
	Nebraska	290.8	325.2	6.65	7.43	1.27	1.35
	Kansas	118.1	118.8	2.55	2.56	0.59	0.55
Appalachia	Virginia	55.3	60.6	6.48	7.19	0.49	0.47
	West Virginia	3.5	3.9	1.06	1.18	0.15	0.19
	North Carolina	52.0	53.8	5.82	6.09	0.44	0.48
	Kentucky	32.2	37.7	2.34	2.74	0.26	0.28
	Tennessee	46.2	48.6	3.98	4.18	0.40	0.42
Southeast	South Carolina	15.1	15.6	3.20	3.38	0.34	0.37
	Georgia	54.8	55.4	5.31	5.54	0.53	0.55
	Florida	113.7	119.9	10.94	11.97	0.58	0.57
	Alabama	11.4	11.5	1.27	1.32	0.16	0.16
Delta States	Mississippi	21.3	21.1	2.10	2.12	0.30	0.29
	Arkansas	40.6	41.0	2.88	2.92	0.37	0.40
	Louisiana	19.6	19.5	2.52	2.54	0.26	0.28
Southern Plains	Oklahoma	55.4	56.2	1.83	1.86	0.35	0.37
	Texas	320.3	328.7	2.51	2.60	0.49	0.52
Mountain	Montana	88.3	103.2	1.25	1.47	0.60	0.62
	Idaho	41.7	37.3	3.70	3.36	0.62	0.51
	Wyoming	16.2	16.5	0.69	0.70	0.48	0.47
	Colorado	67.1	69.0	2.29	2.38	0.62	0.66
	New Mexico	12.9	12.3	0.42	0.40	0.22	0.21
	Arizona	45.5	46.5	5.41	5.53	1.97	2.10
	Utah	11.7	11.4	1.67	1.62	0.40	0.42
	Nevada	3.6	2.8	0.68	0.53	0.29	0.27
Pacific	Washington	60.8	64.5	4.73	5.02	0.62	0.64
	Oregon	82.3	95.9	5.11	5.96	0.96	1.04
	California	240.0	268.6	9.36	10.65	0.57	0.63
	Hawaii	25.0	30.0	14.65	17.51	0.63	0.59
United States (excludes Alaska)		4,422.4	4,584.6	5.06	5.27	0.76	0.78

Foreign Ownership of U.S. Agricultural Land

ERS maintains a continuing inventory, dating back to 1979, of foreign ownership of U.S. agricultural land, by State and by the owner's country of origin.

The foreign ownership data published by ERS provide a continuing annual inventory of foreign investment in U.S. agricultural land by State and country of origin of owners. Also shown are the types of owners (for example, individual, corporation or partnership). Data showing land uses, such as cropland, pasture, and forest land are listed along with land values.

Concepts, Methods, and Data

Collection and maintenance of foreign ownership data by USDA is done under the Agricultural Foreign Investment Disclosure Act of 1978 (AFIDA). All foreign persons who held U.S. agricultural land as of February 1, 1979, were required to report those holdings. Thereafter, such persons who acquire or dispose of U.S. agricultural land must report these transactions within 90 days. Those who hold land that subsequently becomes or ceases to be agricultural land or persons holding agricultural land who become or cease to be foreign persons must also report within 90 days.

Under AFIDA, agricultural land is all land used for agricultural, forestry, or timber production. Foreign persons include individuals, governments, partnerships, trusts, estates, associations, and corporations, including U.S. corporations that are as little as 10 percent foreign-owned.

Foreign ownership is reported through the Agricultural Stabilization and Conservation Service office for the county in which the real estate is located. Failure to comply with AFIDA subjects the foreign owner to a possible civil penalty of up to 25 percent of the market value of the interest held in the land.

The reports are summarized each year. Reported changes, along with information from the previous year, provide a continuing inventory of foreign ownership.

Publications and Availability

The AFIDA statistics are published for States each April. The most recent report is *Foreign Ownership of U.S. Agricultural Land through December 31, 1991*, April 1992; a supplemental report with a similar title provides county-level data.

An electronic database containing data from all reports filed under AFIDA through the end of each year is available. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contact: J. Peter DeBraal, Land and Capital Assets Branch, Resources and Technology Division (202-219-0425).

Sample table--U.S. agricultural landholdings of foreign owners, by State, December 31, 1991

Region and State		Total land area[1]	Privately owned agricultural land[2]	Foreign-owned agricultural land	Proportion of foreign-owned to privately owned agricultural land
		-----Thousand acres-----		*Acres*	*Percent*
Northeast	Maine	19,837	18,065	2,828,483	15.7
	New Hampshire	5,756	4,251	220,199	5.2
	Vermont	5,935	5,153	120,374	2.3
	Massachusetts	5,008	2,664	1,934	0.1
	Rhode Island	675	357	0	0
	Connecticut	3,118	1,884	1,074	0.1
	New York	30,321	21,893	263,895	1.2
	New Jersey	4,779	2,438	19,343	0.8
	Pennsylvania	28,728	21,518	56,824	0.3
	Delaware	1,237	972	5,870	0.6
	Maryland	6,296	4,510	52,186	1.2
Lake States	Michigan	36,451	25,742	203,588	0.8
	Wisconsin	34,833	26,729	23,467	0.1
	Minnesota	50,911	36,343	220,775	0.6
Corn Belt	Ohio	26,243	22,519	174,717	0.8
	Indiana	22,996	20,493	79,713	0.4
	Illinois	35,613	31,633	185,062	0.6
	Iowa	35,818	33,582	32,012	0.1
	Missouri	44,125	39,289	82,195	0.2
Northern Plains	North Dakota	44,352	39,211	30,851	0.1
	South Dakota	48,609	39,556	42,882	0.1
	Nebraska	49,052	45,444	76,251	0.2
	Kansas	52,338	49,780	73,574	0.1
Appalachia	Virginia	25,410	20,963	117,063	0.6
	West Virginia	15,436	13,531	102,459	0.8
	North Carolina	31,260	26,392	229,659	0.9
	Kentucky	25,388	22,578	93,226	0.4
	Tennessee	26,339	21,873	174,298	0.8
Southeast	South Carolina	19,330	15,851	190,692	1.2
	Georgia	37,156	32,338	573,040	1.8
	Florida	34,658	23,975	562,039	2.3
	Alabama	32,491	28,620	409,759	1.4
Delta States	Mississippi	30,229	26,713	502,458	1.9
	Arkansas	33,330	27,981	188,329	0.7
	Louisiana	28,494	24,523	688,373	2.8
Southern Plains	Oklahoma	43,939	38,500	53,795	0.1
	Texas	167,691	154,417	1,078,999	0.7
Mountain	Montana	93,048	53,052	555,651	1.0
	Idaho	52,744	15,256	22,944	0.2
	Wyoming	62,073	24,459	170,896	0.7
	Colorado	66,301	36,618	584,455	1.6
	New Mexico	77,654	35,705	926,014	2.6
	Arizona	72,645	10,502	326,700	3.1
	Utah	52,527	11,892	68,107	0.6
	Nevada	70,332	8,248	179,912	2.2
Pacific	Washington	42,567	22,530	375,841	1.7
	Oregon	61,558	28,022	746,285	2.7
	California	100,031	44,042	915,882	2.1
	Hawaii	4,112	1,998	175,517	8.8
Total (excludes Alaska)		1,899,774	1,264,605	14,807,662	1.2

[1]1980 land area from Geography Division, Bureau of the Census.

[2]Privately held land based on A. Daugherty, unpublished data, U.S. Dept. Agr., Econ. Res. Serv., 1987. Estimate of total land less public, Indian, transportation, and urban land. Includes forest land, pastureland, cropland, rangeland, and miscellaneous uses.

Major Land Uses in the United States

The ERS major land-use series, dating back to 1910, provides an accounting for five categories of U.S. land within States, regions, and the Nation.

The ERS major land-use series provides the only accounting for all U.S. land within States, regions, and the Nation. The series includes annual estimates of cropland used for crops. These data are widely used by analysts, policymakers, legislators, and the news media. The series on cropland used for crops underlies the regional and national indexes of crop production per acre.

Concepts, Methods, and Data

ERS classifies the land base as cropland, grassland pasture and range, forest land, special-use land, and miscellaneous uses. Land uses are also designated as agricultural and nonagricultural; some uses are further identified by ownership.

Estimates, which include acreage by major use, are sometimes published along with analyses of the extent, direction, and causes of changes over time. The procedures used and the detail available in the land-use statistics are largely determined by characteristics of the available basic data, which are of varying quality and come from numerous agencies and organizations. Following evaluation, acres of grassland pasture and range, and special and unclassified land uses are subject to adjustment. Changes are seldom made in cropland acreage.

Maintaining comparability of the series over time is a general goal. More detailed estimates than had been available earlier were begun for several use categories in 1950. Land-use data were added for Alaska and Hawaii in 1959.

Special attention is given to the cropland used for crops because of its importance to the agricultural sector. Cropland used for crops includes harvested cropland, crop failure, and cultivated summer fallow but excludes idle cropland and land used for pasture. Estimates are available beginning with 1910. Regional and national estimates are developed annually. State estimates are made for years for which there is a census of agriculture.

Estimates of cropland uses are largely based on Bureau of the Census and NASS reports. Data on principal crops from NASS are supplemented with data from the agriculture census, especially for minor commodities not reported by NASS. Double-cropped acreage, as indicated by the census, is subtracted from total harvested acres to avoid double-counting, and the difference represents harvested cropland. Harvested cropland estimates are reconciled with census data that have been adjusted for underenumeration. Crop failure and fallow are taken into account.

Publications and Availability

The major land-use series is updated and published in a special report following each census of agriculture. For example, after the 1987 Census of Agriculture the report *Major Uses of Land in the United States: 1987* (AER-643, January 1991) provided updated series. A similar report will be published following the 1992 Census of Agriculture. The cropland series is also reported in *Agricultural Resources: Cropland, Water, and Conservation Situation and Outlook Report.*

Other published sources for the land-use series include *Agricultural Statistics*, published annually by USDA, and the *Statistical Abstract of the United States*, published each year by the Bureau of the Census. The series on cropland used for crops and related indexes are published each year in *Economic Indicators of the Farm Sector: Production and Efficiency Statistics.*

A more detailed description of the major land-use statistics is available in *Major Statistical Series of the U.S. Department of Agriculture: Land Values and Land Use* (AH-671, Vol. 6, August 1988).

State, regional, and national estimates are available electronically for 15 major land-use categories for 1945 and later census-of-agriculture years. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contacts: Arthur Daugherty or Ken Krupa, Land Branch, Resources and Technology Division (202-219-0422).

Sample table--Major uses of land, United States[1]

Land use	1950	1959	1969	1978	1982	1987
			Million acres			
Cropland	478	458	472	471	469	464
Cropland used for crops	383	359	333	369	383	331
Idle cropland	26	34	51	26	21	68
Cropland pasture	69	65	88	76	65	65
Grassland, pasture, and range	701	633	604	587	597	591
Forest-use land	652	728	723	703	655	648
Grazed forest-use land	320	245	198	172	158	155
Other forest-use land	332	483	525	531	497	493
Special-use areas	118	123	141	158	270	279
Miscellaneous other land	324	329	324	345	274	283
Total land area	2,273	2,271	2,264	2,264	2,265	2,265

[1]For information on the content of series shown in this table see: *Major Uses of Land in the United States: 1987*, U.S. Dept. Agr., Econ. Res. Serv. (AER-643, Jan. 1991).

Sample table--Major uses of land, by region, 1987[1]

Region	Cropland		Grassland pasture and range		Forest-use land		Special uses and miscellaneous other land		Total land area	
	Million acres	*Percent*	*Million acres*	*Percent*	*Million acres*	*Percent*	*Million acres*	*Percent*	*Million acres*	*Percent*
Northeast	15.7	14	2.8	3	69.0	62	24.2	22	111.7	100
Lake States	42.4	35	5.5	5	46.2	38	28.1	23	122.2	100
Corn Belt	99.6	60	12.9	8	29.1	18	23.2	14	164.8	100
Northern Plains	109.6	56	67.1	35	3.9	2	13.7	7	193.3	100
Appalachian	29.5	24	6.5	5	70.5	57	17.3	14	123.8	100
Southeast	18.3	15	10.0	8	73.5	59	21.8	18	123.6	100
Delta States	23.9	26	7.3	8	47.5	52	13.4	15	92.1	100
Southern Plains	52.3	25	122.4	58	20.5	10	16.4	8	211.6	100
Mountain	47.0	9	302.3	55	117.4	21	80.6	15	547.3	100
Pacific	25.3	12	52.0	25	80.6	39	46.4	23	204.3	100
48 States	463.6	24	588.8	31	558.2	29	285.1	15	1,895.7	100
Alaska	.1	0	1.2	0	88.6	24	275.4	75	365.3	100
Hawaii	.3	7	1.1	27	1.3	32	1.4	34	4.1	100
United States	464.0	20	591.1	26	648.1	29	561.9	25	2,265.1	100

[1]For information on the content of series shown in this table see: *Major Uses of Land in the United States: 1987*, U.S. Dept. Agr., Econ. Res. Serv. (AER-643, Jan. 1991).

Characteristics of Hired Farmworkers

Information on the number of hired farmworkers and characteristics such as sex, race, age, and education is published at both the regional and the national levels.

Published information on the annual average number of hired farmworkers and their demographic and employment characteristics by regions and for the Nation is used to assess the effect of farm labor legislation, technological developments, and other social and economic changes on the welfare of hired farmworkers. Low wages and unstable, short-term employment combine to make hired farmworkers one of the most economically disadvantaged occupational groups in the United States.

Concepts, Methods, and Data

An earlier source of socioeconomic data on hired farmworkers was the Agricultural Work Force Survey, conducted by ERS from 1945 to 1987. The survey collected information on the total number of people who did hired farmwork at any time during the year. In 1992, ERS began publishing estimates on hired farmworkers based on the Current Population Survey (CPS) earnings microdata file. The CPS is sponsored by the Bureau of Labor Statistics and conducted by the Bureau of the Census. The CPS provides information on the average number of hired farmworkers employed during the year. Estimated numbers of farmworkers derived from this survey are not comparable with numbers derived from the earlier Agricultural Work Force Survey.

The CPS, the primary source of monthly estimates of total employment and unemployment in the United States, is based on a probability sample of households representing the U.S. civilian noninstitutional population. Each month, about 57,000 households are sampled throughout all 50 States and the District of Columbia. Selected households are interviewed for 4 consecutive months, dropped from the survey for 8 months, then interviewed for a final 4 months. Part of the sample is changed monthly. During monthly visits or phone interviews, enumerators complete questionnaires for household members age 15 and older. Questions are asked of each member's labor force activity during the survey week. The sample information is expanded to national-level estimates.

Each month, workers in about one-quarter of the CPS households are asked additional questions on weekly hours worked and earnings. Each month's records are based on different groups of people. The year's data file contains information on nearly 491,000 people, including more than 1,600 hired farmworkers. The data allow farmworker characteristics to be compared with those of all employed people as well as with other occupational groups.

The CPS earnings microdata are the only annual demographic information on the entire U.S. hired farm workforce. They include those who work on crop and livestock farms as well as those employed by agricultural service establishments. Hired farmworkers are people who did farmwork for cash wages or salary during the survey week, including those who manage farms for employers on a paid basis, supervisors of farmworkers, and farm and horticultural nursery workers. The CPS classifies workers in the job at which they worked the greatest number of hours during the survey week. Thus, workers who spend more time at nonfarm work than at farm jobs are not included in the count of hired farmworkers.

Worker characteristics and weekly earnings are published, including information on age, sex, racial/ethnic group, marital status, years of schooling completed, geographic region, weekly hours worked, and type of farm where employed. The data are available for the 10 farm production regions and the United States. Weekly earnings represent what the farmworker usually earns from farmwork, including overtime pay, before deductions.

Publications and Availability

The CPS earnings microdata file was first used to examine the number and characteristics of hired farmworkers in 1990 and published in *A Profile of Hired Farmworkers: 1990 Annual Averages* (AER-658, February 1992). Future reports will be issued annually.

The CPS earnings microdata file is available from BLS. Call 202-523-1776.

Contact: Victor Oliveira, Farm and Rural Economy Branch, Agriculture and Rural Economy Division (202-219-0932).

Sample table--Characteristics of hired farmworkers, 1990

Characteristic	1990 annual averages[1]	
	Workers	Median weekly earnings
	Thousands	*Dollars*
Total	886	200
Sex:		
Male	735	216
Female	151	175
Race:		
White[2]	540	201
Hispanic	260	213
Black[2]	85	175
Age:		
15-19	144	100
20-24	135	206
25-34	251	240
35-44	170	250
45-54	90	200
55 and older	95	200
Education:		
0-4 years	98	204
5-8 years	191	200
9-11 years	202	168
12 years	278	240
13 or more years	116	260

[1]Preliminary.
[2]Excludes persons of Hispanic origin.
Source: Based on the Current Population Survey earnings microdata file.

Economic and Social Structure of Nonmetro Counties

ERS's classification of nonmetro counties highlights the diversity of rural America and its economic and social conditions.

ERS updated its socioeconomic classification of nonmetro (rural) counties in 1990. Both the earlier and updated classifications identify distinct types of counties according to their major economic base or population characteristics. Statistics using these classifications demonstrate the diverse experience of nonmetro areas. Effective rural policy analysis depends on an understanding of this diversity.

Concepts, Methods, and Data

The original classification of rural counties, published in 1985, used seven county types to summarize the diversity of rural economic and social conditions. Four county types--farming, manufacturing, mining, and government--represented economic specializations. Three county types--persistent poverty, Federal lands, and destination retirement--identified unique characteristics having special rural policy significance. Rural counties that fell in none of the seven types were listed as "unclassified." The classification permitted overlap.

The 1990 classification updated the four economic base or economic specialization county types. As now defined, farming-dependent counties are those for which farming accounted for 20 percent or more of total labor and proprietor income in 1981, 1982, 1984, 1985, and 1986. A 5-year annual average is used because of fluctuations in farm income. Analysts omitted 1983 because farm income was unusually low that year.

In the updated classification, manufacturing-dependent counties are those for which manufacturing contributed 30 percent or more of total labor and proprietor income in 1986. Mining-dependent counties had 20 percent or more of total labor and proprietor income from mining in 1986, and specialized government counties had 25 percent or more of total labor and proprietor income from government activities in 1986.

The remaining three county types, which were not updated, remain defined as before:

- Persistent-poverty counties are those with per capita personal income in the lowest quintile among counties in 1950, 1959, 1969, and 1979.
- Federal-lands counties are those in which 33 percent or more of the land area was owned by the Federal Government in 1977.
- Destination-retirement counties had net immigration rates of 15 percent or more of people age 60 and over during 1970-80. The immigration rates are based on 1980 population age 60 and over.

Although the number of unclassified counties increased by about one-third, the criteria for listing counties in that way were unchanged.

The socioeconomic classification for nonmetro counties is closely tied to statistics of other departments and units of government. For example, the classification builds on the U.S. Office of Management and Budget designation of metro and nonmetro counties. Employment and unemployment estimates come from the U.S. Department of Labor and are largely derived from the Current Population Survey of the Bureau of the Census. Income estimates come from the Bureau of Economic Analysis. The population estimates rely largely on the Census of Population and other census statistics.

Publications and Availability

Seven distinct types of counties were identified in *The Diverse Social and Economic Structure of Nonmetropolitan America* (RDRR-49, September 1985). The 1990 classification is discussed further in *An Update: The Diverse Social and Economic Structure of Nonmetropolitan America* (Staff Report AGES 9036, May 1990). The county typology is used extensively in ERS publications, especially those of the Agriculture and Rural Economy Division. One example is an analysis of farming-dependent counties in *The U.S. Farming Sector Entering the 1990's* (Twelfth Annual Report on the Status of Family Farms, AIB-587, June 1990). Another example of use of the classification is an article titled "Nonmetro Retirement Counties' Strengths and Weaknesses," *Rural Development Perspectives*, Vol. 6, Issue 2, February-May 1990.

Designation of nonmetro counties based on the classification system described above is available in electronic form. For a listing of available electronics data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contacts: Peggy Ross, Office of the Director, Agriculture and Rural Economy Division (202-219-0520) or Thomas Hady, National Economy and History Branch, Agriculture and Rural Economy Division (202-219-0780).

Sample table--Selected data by nonmetro county types

Item	Unit	Farming	Manufacturing	Mining	Government	Persistent-poverty	Federal lands	Retirement
Counties by region:								
Northeast	Number	1	45	2	18	0	1	21
Midwest	Number	293	160	19	82	15	12	109
South	Number	151	350	73	164	223	37	298
West	Number	71	22	30	94	4	197	87
Population per square mile, 1986	Number	13.1	68.7	34.5	46.7	30.8	15.4	47.2
Population 65 and older, 1986	Percent	16.8	13.9	11.7	13.0	14.2	12.4	16.2
High school graduates, 1980	Percent	68.5	60.0	59.6	65.5	48.2	74.2	63.7
Per capita income, 1986	Dollars	12,321	10,860	10,998	10,082	8,219	11,193	11,026
Percent 1986 income from:								
Earnings	Percent	60.3	65.7	64.6	61.2	60.3	62.7	59.3
Property	Percent	21.9	15.4	15.9	16.5	13.8	18.2	19.5
Transfers	Percent	17.8	18.9	19.5	22.3	25.9	19.1	21.3
Unemployment rate, 1986	Percent	7.4	9.5	12.8	10.0	13.0	10.2	9.1

Farm and Rural Population Estimates

Farm and rural population estimates published by ERS include concepts related to occupation, income, and residence.

Several definitions of farm and rural populations have been suggested because farm residence, farmwork, and the receipt of farm income are less closely linked than they once were. The definitions include concepts related to occupation, income, and residence. Use of statistics based on these definitions may suggest more effective and more responsive policies for specific target groups.

Concepts, Methods, and Data

The *farm operator population*, which is an occupation concept, is defined as all people living in households in which at least one member is employed primarily as a farm operator or farm manager, as defined by the Bureau of the Census. Households are also included if at least one unemployed member indicates that his or her last primary employment was as a farm operator or farm manager. Operators who live off-farm are included, since there is no residence requirement.

Another concept based on occupation is the *farmworker population*. The farmworker population parallels the farm operator population by including those primarily employed as farmworkers and their household members. Again, residence is not a determining factor.

The farm income population includes households with at least one member who received farm self-employment income in the preceding year. Farm self-employment income is net money income (gross receipts minus operating expenses) received by a person on his or her own account, as an owner, renter, or sharecropper. Again, there is no farm residence requirement. Hired farmworkers are not included unless someone in the household received farm self-employment income.

By contract with ERS, the Bureau of the Census has historically published residence-based estimates of the *farm population*. That population includes all people residing on farms (places with gross sales of $1,000 or more), without regard to occupation or income. Estimates of the *rural population* are published along with those for farm residents.

In addition to the above concepts, a category called the *farm entrepreneurial population* has been used since 1987. The farm entrepreneurial population consists of persons in households identified by either or both of the farm operator and farm income populations already listed. The farm entrepreneurial population is smaller than the sum of the occupation and income populations because there is overlap between those two groups.

Data used in preparing the full range of farm and rural population estimates come from the Bureau of the Census and NASS. Census data sources include the census of population and the Current Population Survey.

Publications and Availability

Statistics for the farm-related populations based on occupation, income, and residence were presented, along with detailed descriptions of the concepts, in *Alternative Definitions of Farm People* (Staff Report AGES 89-9, USDA, ERS, March 1989).

An annual report, first published as *The Farm Entrepreneurial Population, 1988* (RDRR-78, July 1990), describes concepts underlying the Farm Entrepreneurial Population estimates. A comprehensive report including data from 1988-90, *The Farm Entrepeneurial Population, 1988-90* (RDRR-84, February 1993) is now available.

Although not discussed here, another report of potential interest is *Characteristics of Agricultural Work Force Households, 1987* (AIB-612, August 1990).

Readers with an interest in the population living either on farms or in rural areas may wish to examine the cooperative ERS/Bureau of the Census report on *Residents of Farms and Rural Areas: 1990* (Series P-20, No. 457, April 1992).

Contacts: Farm occupation, farm income, and farm entrepreneurial populations: Margaret Butler, Human Resources and Industry Branch, Agriculture and Rural Economy Division (202-219-0534).

Residents of farms and rural areas: Laarni Dacquel, Human Resources and Industry Branch, Agriculture and Rural Economy Division (202-219-0540).

Sample table--Selected characteristics of farm-related populations, 1990

Item	Farm entrepreneurial			Farm residence
	Total[1]	Farm occupation[2]	Farm income[3]	
		1,000		
Total population	5,705	3,413	5,186	4,591
Male	3,007	1,840	2,722	2,383
Female	2,698	1,574	2,464	2,208
Residence:				
Farm	2,970	2,205	2,771	4,591
Nonfarm	2,734	1,208	2,416	--
Region:				
Northeast	408	263	367	230
Midwest	2,587	1,621	2,451	2,320
South	1,831	1,022	1,602	1,350
West	879	508	766	691
Race:				
White	5,545	3,346	5,052	4,478
Black	91	41	74	69
Hispanic origin[4]	151	81	121	126
Age:				
Under 18	1,534	936	1,383	1,155
18-64	3,654	2,096	3,336	2,734
18-24	505	276	463	373
25-34	827	517	736	532
35-44	831	446	745	633
45-54	780	444	720	593
55-64	711	413	671	604
65 years and over	517	382	468	702
		Years		
Median age	34.8	34.6	35.2	38.9

-- = Not applicable.

[1]The total farm entrepreneurial population is smaller than the sum of the farm occupation and income categories, which are not mutually exclusive.

[2]Includes farm operators, farm managers, and household members of each.

[3]Includes recipients of farm income and their households.

[4]Persons of Hispanic origin may be of any race.

Macroeconomic Indicators

Statistics for monitoring aggregate economic activity, including labor force, employment, foreign trade, inflation, industrial production, and interest rates help to assess the state of the overall economy and to forecast future trends.

A variety of macroeconomic indicators help assess the condition of the overall U.S. economy. Variables such as the labor force, employment, foreign trade, inflation, industrial production, interest rates, money supply, inventories, and measures of aggregate economic activity such as GDP are monitored. These indicators, and many others, help to provide a picture of the current state of the overall economy and are useful in assessing future trends.

Developments in the overall U.S. economy have become increasingly important to explaining and forecasting developments in the rural and farm economies. For example, over the past several years, foreign trade has become more important for the economy in general, and for agricultural commodities and rural-based manufacturing in particular. Likewise, as financial markets have become less regulated, agricultural and rural borrowers face interest rates increasingly determined by general market forces.

Concepts, Methods, and Data

The macroeconomic indicators assembled by ERS largely come from other Federal agencies. Agencies that provide important data include the Bureau of Economic Analysis, the Bureau of Labor Statistics, and the Board of Governors of the Federal Reserve System.

Federal agencies provide different types of data, and publish these data regularly. *The Survey of Current Business*, a monthly journal published by the BEA, includes data on GDP and all of its components, including consumer spending, business investment, foreign trade, and government spending. Other data include variables relevant to studying business cycles and monthly business activity. BLS publishes *Monthly Labor Review*, which contains data about labor force and employment trends, as well as data on consumer and producer prices. The Federal Reserve Board publishes the *Federal Reserve Bulletin*, which contains a wide variety of financial data, including interest rates, exchange rates, money supplies, and debt aggregates.

Publications and Availability

ERS regularly publishes assessments of the general economy in *Agricultural Outlook*, which includes supporting graphs and statistical tables. In addition, assessments are published regularly in the *Agricultural Finance and Income Situation and Outlook Report* and in *Rural Conditions and Trends*.

Contact: Ralph M. Monaco, National Economy and History Branch, Agriculture and Rural Economy Division (202-219-0782).

Sample table--U.S. gross domestic product and related data

Item	Unit	Annual	1991		1992	
		1991	III	IV	I	IIR
		Quarterly data seasonally adjusted at annual rates				
Gross domestic product	1987 billion dollars	4,821.0	4,831.8	4,838.5	4,873.7	4,891.0
Personal consumption expenditures	1987 billion dollars	3,240.8	3,251.2	3,249.0	3,289.3	3,287.4
Durable goods	1987 billion dollars	414.7	419.4	416.1	432.3	429.0
Nondurable goods	1987 billion dollars	1,042.4	1,044.8	1,035.6	1,049.6	1,045.3
Clothing and shoes	1987 billion dollars	181.3	183.7	177.5	184.1	184.3
Food and beverages	1987 billion dollars	515.8	515.0	515.3	518.9	513.9
Services	1987 billion dollars	1,783.7	1,787.0	1,797.4	1,807.3	1,813.1
	1987 billion dollars					
Gross private domestic investment	1987 billion dollars	661.1	672.0	676.9	668.9	712.6
Fixed investment	1987 billion dollars	670.4	671.4	669.3	681.4	703.4
Change in business inventories	1987 billion dollars	-9.3	0.6	7.5	-12.6	9.2
Net exports of goods and services	1987 billion dollars	-21.8	-31.6	-20.5	-21.5	-44.7
Government purchases of goods and services	1987 billion dollars	941.0	940.2	933.1	937.0	935.7
GDP implicit price deflator	Percent change	4.1	2.4	2.4	3.1	2.7
Disposable personal income	Billion dollars	4,209.6	4,227.6	4,284.9	4,360.9	4,412.7
Disposable personal income	1987 billion dollars	3,509.0	3,511.5	3,530.8	3,565.7	3,578.3
Per capita disposable personal income	Dollars	16,658	16,706	16,885	17,143	17,301
Per capita disposable personal income	1987 dollars	13,886	13,876	13,913	14,017	14,030
Total U.S. population, including military abroad	Millions	252.7	252.9	253.7	254.3	254.9
Civilian population	Millions	250.6	250.8	251.6	252.3	253.0

Item	Unit	Annual	April	May	June	July
			Monthly data seasonally adjusted			
Industrial production	1987 = 100	107.1	108.1	108.9	108.5	108.9
Leading economic indicators	1982 = 100	143.6	149.0	149.9	149.5	149.6
Civilian employment	Millions of persons	116.9	117.7	117.7	117.6	117.8
Civilian unemployment rate	Percent	6.6	7.2	7.5	7.8	7.7
Personal income	Billion dollars	4,828.3	5,015.0	5,032.7	5,038.8	5,050.0
Money stock-M2 (daily average)	Billion dollars[1]	3,439.9	3,470.2	3,472.1	3,463.1	3,460.3
Three-month Treasury bill rate	Percent	5.42	3.81	3.66	3.70	3.28
AAA corporate bond yield (Moody's)	Percent	8.77	8.33	8.28	8.22	8.07
Housing starts	1,000[2]	1,014	1,086	1,196	1,151	1,119
Auto sales at retail, total	Millions	8.4	8.2	8.4	8.9	8.3
Business inventory/sales ratio		1.52	1.51	1.52	1.50	--
Sales of all retail stores	Billion dollars	151.8	158.4	159.1	158.7	159.5

R = Revised.
-- = Not available.
[1]Annual data as of December of the year listed.
[2]Private, including farm.

Nonmetro Employment and Unemployment

Analyses of nonmetro employment and unemployment statistics increase understanding of economic conditions in rural areas.

ERS analysts assemble and maintain data series and publish analyses showing levels and rates of change in nonmetro employment and unemployment. The data are reported by major industry, county types, and State.

Statistics on employment and unemployment are essential in understanding economic conditions in rural areas and for guiding rural policy.

Concepts, Methods, and Data

Data on nonmetro employment and unemployment come from three sources. The monthly Current Population Survey (CPS), conducted by the Bureau of the Census for the Department of Labor, provides detailed information on the labor force, employment, unemployment, and demographic characteristics of the metro and nonmetro populations. The CPS estimates are derived from a national sample of households representing the U.S. civilian noninstitutional population age 16 and older. Labor force information is based on the respondents' activities during 1 week each month.

The Bureau of Labor Statistics (BLS) county-level employment data are taken from unemployment insurance claims and State surveys of establishment payrolls that are then benchmarked to State totals from the CPS. Thus, at the national and State levels, annual average BLS and CPS estimates are the same. The BLS data provide monthly estimates of labor force, employment, and unemployment for individual counties.

Bureau of Economic Analysis (BEA) employment data, unlike the CPS household data, provide information on the number of jobs rather than the number of workers. BEA data provide detailed information on the number and types of jobs, earnings by industry, and sources and amounts of income at the county level.

Each of these data sets has advantages and disadvantages. CPS furnishes detailed employment, unemployment, and demographic data for the Nation's metro and nonmetro areas. BEA provides estimates of the number of jobs and earnings by industry for individual county areas.

BLS data provide less detailed employment data than the other two series, but offer current and timely employment and unemployment information at the county level. While these data sources may result in different estimates of employment at any time, they generally indicate similar trends.

Nonmetro areas are not considered as part of Metropolitan Statistical Areas (MSA's). MSA's include core counties containing a city or several smaller cities totaling 50,000 or more people and a total area population of at least 100,000. Additional contiguous counties are included in an MSA if they are economically and socially integrated with the core county. Metro areas are divided into central cities and areas outside central cities (suburbs). Sometimes the terms urban and metro are used interchangeably to refer to people or places within MSA's. Nonmetro counties are those outside of metro area boundaries. The terms rural and nonmetro are sometimes used interchangeably to refer to people and places outside of MSA's.

Publications and Availability

ERS analyses and data on employment, unemployment, and earnings are published in such periodical reports as *Rural Conditions and Trends* and *Rural Development Perspectives*. Special reports, such as *Rural America: Economic Performance*, 1989, are other published sources of such information.

Data on employment, unemployment, and related items are available electronically. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contacts: Linda Ghelfi, Office of the Director (202-219-0520) or Timothy Parker, Human Resources and Industry Branch (202-219-0540), Agriculture and Rural Economy Division.

Sample table--Nonmetro employment and unemployment, 1985-91

Year/quarter	Labor force	Labor force participation	Employment	Unemployment	Unemployment rate	Adjusted unemployment rate[1]
	Thousands	*Percent*	-------- *Thousands* --------		------- *Percent* -------	
1991:						
4th	26,442	62.5	24,745	1,697	6.4	10.1
3rd	26,364	62.9	24,683	1,681	6.4	10.3
2nd	25,529	63.1	24,673	1,856	7.0	10.7
1st	26,049	61.9	23,898	2,151	8.3	12.3
1990:						
4th	26,361	62.6	24,776	1,585	6.0	9.7
3rd	26,607	63.2	25,158	1,450	5.4	8.8
2nd	26,417	63.2	24,934	1,483	5.6	8.9
1st	25,893	62.2	24,196	1,697	6.6	10.0
1991	26,346	62.6	24,500	1,846	7.0	10.8
1990	26,319	62.8	24,766	1,554	5.9	9.4
1989	26,209	63.2	24,718	1,491	5.7	9.1
1988	25,409	62.4	23,827	1,582	6.2	10.1
1987	25,101	62.1	23,302	1,799	7.2	11.3
1986	25,171	61.9	23,091	2,080	8.3	12.8
1985	24,781	61.2	22,700	2,081	8.4	13.0

[1]Unemployment rate adjusted to include discouraged workers and half of the workers employed part-time for economic reasons.

Source: Bureau of the Census, Current Population Survey.

Off-Farm Income

Estimates of off-farm income of farm and ranch operators and their families help to assess their complete income situation.

Annual estimates of off-farm income of the operators of farms and ranches and their families, along with information on income from farming, help in assessing the income situation of participants in the sector. These survey-derived estimates are published at the national level by value of sales, and as averages per family. Percentage distributions by value of sales are also presented. Aggregate off-farm income estimates are published by State.

Concepts, Methods, and Data

Off-farm income includes cash income from off-farm wages and salaries, net income from nonfarm businesses and professional practices, interest, dividends, retirement and disability payments, royalties, and other cash income. Wages and salaries earned on other farms are also included. Payments in kind, the value of housing, and other noncash sources of income are excluded.

The principal farm operator is defined as the person most directly responsible for day-to-day management decisions. When partners share equally in decisionmaking, the oldest partner is considered the principal operator. Operators include owners, tenants, and managers of corporate or institutional farms.

As now estimated, the off-farm income estimates are largely based on annual data from USDA's Farm Costs and Returns Survey (FCRS). The 1988 Agricultural Economics and Land Ownership Survey (AELOS) of the Bureau of the Census serves as another important data source. The AELOS is especially important in preparing State-level estimates of off-farm income.

It is inappropriate to add the estimates of farm income and off-farm income together because they are for somewhat different recipient populations. For example, net cash farm income is an estimate of all such income of farming establishments, regardless of who receives it. The off-farm income estimates relate only to income received by the principal operators and their families.

Reluctance by farm families to talk about their off-farm income can impair the accuracy of the estimates. The FCRS questionnaires used in collecting off-farm income estimates were changed beginning with 1985. Respondents are now asked to report off-farm income in suitable ranges rather than as precise values. This change appears to have improved reporting.

Publications and Availability

ERS publishes the off-farm income estimates by value of sales and U.S. totals in *Economic Indicators of the Farm Sector, National Financial Summary*. The aggregate annual estimates of off-farm income by State are published in *Economic Indicators of the Farm Sector, State Financial Summary*.

Electronic databases on the above reports include the off-farm income data. For a listing of available electronic data products call 1-800-999-6779 and request a copy of *Reports* catalog.

Contacts: Roger Strickland or Linda Farmer, Farm Sector Financial Analysis Branch, Agriculture and Rural Economy Division (202-219-0804).

Sample table--Off-farm cash income of the principal farm operator and family, by value of farm product sales, 1985-90

Year	$1 million or more	$500,000 to $999,999	$250,000 to $499,999	$100,000 to $249,999	$40,000 to $99,999	$20,000 to $39,999	Less than $20,000
				Million dollars			
Total:							
1985	NA	618	1,138	2,897	5,872	5,325	39,310
1986	NA	901	1,219	3.056	4,779	4,547	40,045
1987	306	507	1,522	3,643	5,365	5,902	39,073
1988	342	566	1,699	4,065	5,641	6,402	38,448
1989	338	590	1,649	3,310	5,899	6,477	39,036
1990	441	708	1,774	3,873	7,754	8,266	44,159
				Percent			
Percentage distribution:							
1985	NA	1.1	2.1	5.3	10.6	9.7	71.3
1986	NA	1.7	2.2	5.6	8.8	8.3	73.4
1987	0.5	.9	2.7	6.5	9.5	10.5	69.4
1988	0.6	1.0	3.0	7.1	9.9	11.2	67.3
1989	0.8	1.2	3.1	6.8	10.3	11.3	68.1
1990	0.7	1.1	2.6	5.8	11.6	12.3	65.9
				Dollars			
Per family:							
1985	NA	22,646	14,900	12,994	17,906	21,808	28,204
1986	NA	30,133	17,473	14,063	15,680	18,408	28,996
1987	29,861	26,910	25,617	17,149	16,953	25,162	28,709
1988	29,406	26,766	28,535	18,689	18,082	25,787	28,972
1989	25,259	22,991	24,511	16,054	18,742	24,460	30,534
1990	28,472	25,916	27,629	18,096	25,335	31,916	35,206

NA = Not available.

Operating Statistics of Banks

Available bank operating statistics focus on differences between metro and nonmetro banks based on their levels of assets, liabilities, income, and expenses.

Bank operating statistics and published analyses for nonmetro, metro, and all U.S. banks are presented by various bank characteristics, including location, size, financial status, and branch or holding company affiliation. Loans are differentiated by type. The statistics include commonly used financial ratios calculated from each bank's levels of assets, liabilities, income, and expenses. Annual percentage changes in operating statistics are estimated. The principal focus in the statistics is on nonmetro-metro differences.

Concepts, Methods, and Data

ERS reports summarize bank operating statistics for commercial banks insured by the Federal Deposit Insurance Corporation. All bank portfolio, income, and expense data are taken from the Report of Condition--Report of Income (RCRI) database maintained by the Board of Governors of the Federal Reserve System. The RCRI is a bank-level database in which each branch banking firm is treated as a single bank at the headquarter's location. A single data record for the combined operation lists all publicly available operating data.

Income and expense data are for the calendar year, while the values for other items are as of year's end. The situation for any single year may differ considerably from an average of several years. While some aggregate ratios (such as problem loans/assets, and income/equity capital) can change rapidly over time, other ratios (such as agricultural loans/total loans) usually change slowly. Operating statistics that generally change slowly may change more rapidly for certain classes of banks. Also, the nature of banks with high loan losses can differ over time. For example, agricultural banks may have high loan losses in one year, while those in energy-dependent counties might suffer such losses in another year.

ERS bank operating statistics are mostly presented as weighted or aggregate statistics. The contribution of each bank to the weighted statistics is determined by the bank's size, with larger banks having a greater influence. Bank averages (means) of asset liability, income, and expense items are also published. A full set of means and operating statistics is separately provided for nonmetro, metro, and all U.S. banks.

Publications and Availability

The bank operating statistics described in this section are published, along with lists of terms and definitions, in research monographs such as *Nonmetro, Metro and U.S. Bank-Operating Statistics, 1990* (SB-846, November 1992) and similar earlier reports. A list of terms and definitions is provided in the Appendix to Statistical Bulletin 846. Analyses of the data have also been published in ERS periodicals such as *Rural Development Perspectives* and in various professional papers and articles. The basic RCRI bank operating data are available through the National Technical Information Service.

Contacts: James Mikesell and Patrick Sullivan, Finance and Development Policy Branch, Agriculture and Rural Economy Division (202-219-0719).

Sample table--Selected U.S. commercial bank statistics (weighted) by county type and bank age, December 1989[1]

Bank statistic	County type							
	Nonmetro		Metro		Major economic sector			
	All	Totally rural	All	Major metro	Agriculture	Energy	Manufacturing	Retirement
					Number			
Total banks	6,968	989	5,689	1,533	2,115	577	3,626	1,629
New banks[2]	360	36	1,219	449	66	38	361	288
					Ratio to all banks			
Total banks	0.55	0.08	0.45	0.12	0.17	0.05	0.29	0.13
Assets per bank	0.21	0.11	1.97	4.49	0.13	0.24	0.93	0.44
Government securities, share of assets	1.97	2.30	0.87	0.68	2.25	2.21	1.19	1.30
Total loans, share of assets	0.87	0.80	1.02	1.01	0.79	0.78	1.04	1.02
Agricultural loans, share of loans	6.12	13.32	0.42	0.28	15.31	3.28	0.80	1.58
Nonagricultural business loans, share of loans	0.63	0.52	1.04	1.18	0.50	0.80	0.90	0.61
Loan-loss provision, share of loans	0.47	0.45	1.06	1.25	0.49	0.55	0.79	1.14
Capital, share of assets	1.10	1.23	0.99	1.00	1.19	1.14	0.97	0.96
Problem loans, share of capital	0.54	0.57	1.07	1.30	0.56	0.65	0.77	1.04

[1]U.S. (50 States) commercial banks that were insured by the Federal Deposit Insurance Corporation and that reported positive assets as of Dec. 31, 1989.
[2]Started Dec. 1, 1984, or later, including replacements for failed or closed banks.

Poverty in Nonmetro Areas

ERS poverty studies use data compiled by other Federal agencies to analyze the effects of economic conditions on rural Americans.

The collection and study of nonmetro poverty statistics support efforts to better understand the characteristics of poverty and its sources. Design of improved macroeconomic policies can lead to better nonmetro opportunities and help alleviate poverty.

Concepts, Methods, and Data

ERS relies on other Federal agencies for the data that underlie its studies of poverty. However, emphasis in ERS is on the rural segment of the population, and on how that population may have been affected by economic conditions and policies and by demographic trends. Insights are gained by bringing together various concepts and data for analysis.

Much of this work is based on data from the March supplement of the Current Population Survey (CPS) of the Bureau of the Census. The CPS is a stratified sample that collects labor force, demographic, income, and migration data for persons, families, and households. The March CPS obtains current demographic and employment information, and income data for the preceding calendar year.

For the survey, a family is defined as persons living together who are related by birth, marriage, or adoption, and the family head is the person in whose name the home is owned or rented. If the home is jointly owned or rented by a married couple, either may be designated as the head.

Nonmetro counties are those outside of Metropolitan Statistical Areas (MSA's). MSA's include core counties containing a city or several smaller cities totaling 50,000 or more people and a total area population of at least 100,000. Additional contiguous counties are included in an MSA if they are economically and socially integrated with the core county. Metro areas are divided into central cities and areas outside central cities (suburbs).

Sometimes the terms urban and metro are used interchangeably to refer to people or places within MSA's. The terms rural and nonmetro are sometimes used interchangeably to refer to people and places outside of MSA's.

Publications and Availability

ERS analyses and data on poverty in nonmetro areas are published in such periodical reports as *Rural Conditions and Trends* and *Rural Development Perspectives*. Other published sources of information are special reports and monographs such as *Work and Poverty in Metro and Nonmetro Areas* (ERS, USDA, RDRR-81, June 1991).

Contact: Linda Swanson, Human Resources and Industry Branch, Agriculture and Rural Economy Division (202-219-0535).

Sample table--Selected characteristics of the poor, by residence, 1990

Item	U.S. total	Metro			Nonmetro
		Total	Central cities	Suburbs	
			Thousands		
Total poor[1]	33,585	24,510	14,254	10,255	9,075
			Percent		
Poverty rates					
Poverty rate for total population	13.5	12.7	19.0	8.7	16.3
People in families with a female householder, no husband present[2]	37.2	35.8	43.9	26.6	43.2
Related children	53.4	52.5	60.9	41.7	56.8
Married-couple families[2]	6.9	5.9	9.1	4.4	9.9
Related children	10.2	9.1	14.0	6.6	14.0
Unrelated individuals[3]	20.7	19.0	21.8	16.3	27.7
Whites	10.7	9.9	14.3	7.6	13.5
Blacks	31.9	30.1	33.8	22.2	40.8
Hispanics[4]	28.1	27.8	31.7	22.8	32.0
Aged[5]	12.2	10.8	14.6	8.1	16.1
Disabled[6]	35.9	34.8	43.6	25.8	39.0
Groups making up the poor					
Poor who are:[7]					
People in families with a female householder, no husband present[2]	37.5	40.1	45.1	33.2	30.3
Related children	21.9	23.7	26.7	19.6	17.0
Married-couple families[2]	34.6	31.0	27.0	36.7	44.4
Related children	14.6	13.5	11.8	15.9	17.6
Unrelated individuals[3]	22.2	22.8	22.6	23.2	20.4
Whites	66.5	64.1	53.8	78.5	72.9
Blacks	29.3	31.4	41.2	17.8	23.6
Hispanics[4]	17.9	22.5	24.7	19.5	5.4
Aged[5]	10.9	9.8	9.3	10.4	14.0
Disabled[6]	8.8	8.6	9.4	7.6	9.4

[1]Numbers do not add to totals due to rounding.
[2]The term family refers to a group of two or more related persons who live together.
[3]Unrelated individuals live alone or with nonrelatives.
[4]Hispanics may be of any race.
[5]The aged are at least 65 years old. The aged and disabled are mutually exclusive.
[6]Age 16 to 64 with a severe work disability.
[7]Percentages sum to more than 100 percent because individuals may be in more than one group.
Source: U.S. Bureau of the Census.

U.S. Department of Agriculture
Economic Research Service

SUMMARY OF REPORT

New State Rankings by Receipts from Agricultural Commodities

Number 3, December 1992

Cattle and calves, dairy products, corn, hogs, and soybeans were the leading agricultural commodities (in terms of farm cash receipts) in 1991. Those commodities had the same ranking in 1990. The leading States for each commodity were as follows:

- Cattle and calves: Texas, Nebraska, Kansas, Colorado, and Oklahoma.
- Dairy products: Wisconsin, California, New York, Pennsylvania, and Minnesota.
- Corn: Illinois, Iowa, Nebraska, Indiana, and Minnesota.
- Hogs: Iowa, Illinois, Minnesota, Nebraska, and Indiana.
- Soybeans: Illinois, Iowa, Minnesota, Indiana, and Ohio.

Those findings come from a new report by USDA's Economic Research Service, *Ranking of States and Commodities by Cash Receipts, 1991*. One set of tables lists the 25 leading agricultural commodities produced in each State and the United States, ranked by value of cash receipts. Another set of tables lists the major producing States for each of the 25 leading commodities and for several major commodity groupings.

Thirty States had livestock receipts exceeding crop receipts in 1991. In 13 States, the majority of receipts was from sales of a single commodity, indicating a high degree of dependence on the production and market conditions for that commodity.

Commodity Dependence

In 11 States, one livestock commodity had receipts for more than 50 percent of the State's total receipts. Wyoming showed 73 percent of its agricultural receipts as coming from **cattle and calves**; Kansas, 62 percent; Colorado, 60 percent; Oklahoma, 58 percent; Nebraska, 54 percent; Nevada, 51 percent; Texas, 51 percent; and New Mexico, 50 percent. **Dairy** accounted for 72 percent of receipts in Vermont and 52 percent of receipts in Wisconsin. Delaware relied on **broilers** for 63 percent of receipts. In two States, **greenhouse/nursery** products accounted for more that 50 percent of the State's total receipts: Alaska (57 percent) and Rhode Island (55 percent).

Agricultural Diversity

Eight States had sufficient diversification in their agricultural production that the leading commodity accounted for no more than 20 percent of sales receipts. The States and their two leading commodities were: California, dairy (14 percent) and greenhouse (11 percent); Oregon, cattle (18) and greenhouse (15); Florida, oranges (19) and greenhouse (16); South Carolina, tobacco (16) and cattle (11); Minnesota, corn (18) and dairy (17); Virginia, cattle (20) and broilers (15); Ohio, soybeans (20) and corn (20); and Washington, apples (20) and dairy (14).

To Order This Report...

The information presented here is excerpted from ***Ranking of States and Commodities by Cash Receipts***, SB-848, by Roger P. Strickland, Cheryl Johnson, and Robert P. Williams. The cost is $11.00.

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Economic Research Service

SUMMARY OF REPORT

Off-farm Income Is Critical to Most Farm Operator Households

Number 8, February 1993

Contact: Mary Ahearn, 202/219-0306

Farm household income, at $39,007 from both farm and off-farm sources in 1990, is on par with average U.S. household income, according to the Economic Research Service's *The Economic Well-Being of Farm Operator Households, 1988-90.*

The average off-farm income of farm operator households in 1990 was $33,265, or 85 percent of their total household income. Only $5,742 of the total income for farm operator households in 1990 was income from their farms. Most of the off-farm income comes in the form of wages and salaries. In about 60 percent of farm operator households, either or both the farm operator or spouse earned off-farm wage and salary income.

The new report is based on USDA's Farm Costs and Returns Survey.

Nearly three-quarters of farm households operate small farms with gross sales below $50,000. These households lose money on their farms on average. Another 22 percent of farms would still be considered of modest size, with gross sales of $50,000 to $249,999. In 1990, most of these households had a positive return from their farms, averaging $16,236. Only 6.2 percent of farms had sales of $250,000 or more in 1990. Although they are small in number, these larger farms produced just over half of the agricultural commodities in the United States in 1990. Farm households reporting sales in the $250,000 to $499,999 range averaged $53,314 from their farms, and those with sales above $500,000 averaged $118,035.

The receipt of off-farm income has become one of the most important means for farm operator households to diversify their financial position and bring greater security to the household. Only about 20 percent of farm operator households received more income from the farm than off the farm in 1990, although another 10 percent of farm households lost more on their farm than they made off their farm. Small farm households earned the largest off-farm incomes at $37,276, but the off-farm incomes of those with very large farms (with more than $500,000 in sales) were not much lower, at $32,698.

Income of farm operator households and all U.S. households, 1990

Average income of farm operator households is on par with that of all U.S. households.

Item	Farm operator households	U.S. households
Number	1,738,019	94,312,000
	Percent	
Household income class:		
Less than $10,000	22.2	14.9
$10,000 - $24,999	27.2	27.2
$25,000 - $49,999	28.8	33.3
$50,000 and more	21.8	24.6
Below poverty threshold	21.9	13.5[1]
	Average dollars	
Household income	39,007	37,403

[1] For U.S. persons. The poverty rate for U.S. families was 10.7 percent in 1990.

To Order This Report...

The information presented here is excerpted from ***The Economic Well-Being of Farm Operator Households, 1988-90,*** AER-666, by Mary C. Ahearn, Janet E. Perry, and Hisham S. El-Osta. The cost is $15.00.

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U.S. Department of Agriculture
Economic Research Service

SUMMARY OF REPORT

Production Costs for Ethanol to Drop as New Technology Comes On-Line

Number 7, February 1993

Contact: Neil Hohmann (202) 219-0428

The fuel ethanol industry is poised to adopt a wide range of technologies that would reduce costs at every stage of the production process. Adoption of improved enzymes, fermenter designs, membrane filtration, and other innovations in the next 5 years is expected in new ethanol plants constructed to meet new demand resulting from Clean Air Act stipulations for cleaner burning fuel. A new report, *Emerging Technologies in Ethanol Production*, examines the likelihood of near- and long-term cost reductions in producing ethanol, as well as the potential of biomass (agricultural residues, municipal and yard waste, energy crops like switchgrass) to supplement corn as an ethanol feedstock.

Ethanol Industry Expands, Reducing Costs

The use of ethanol as a fuel for vehicles in the United States grew from insignificance in 1977 to nearly 900 million gallons in 1991. The ethanol industry emerged through a combination of government incentives and new technologies, which enabled large-scale production of ethanol from domestic resources, particularly corn. Growing consumer acceptance of ethanol-blended fuels, incentives to gasoline blenders, and falling costs of production (from $1.35-$1.45 per gallon in 1980 to less than $1.25 per gallon in 1992) were responsible for the jump in ethanol production.

The construction of new ethanol production plants and the adoption of new technologies at existing plants is likely to lead to further cost reductions (5-7 cents per gallon over the next 5 years). Improved yeasts, which tolerate high concentrations of ethanol, can lower energy costs. A system of membranes can recycle enzymes and capture high-value coproducts at many steps in the production process.

Longer term technologies would save approximately 9-15 cents per gallon over present costs. Energy and feedstock savings will result from technology that can convert some of the nonstarch portions of corn to ethanol. Development of microorganisms that speed the process will contribute to long-term savings. Development of markets for coproducts of ethanol production will create additional savings. Cost savings may be less for smaller plants that serve niche markets, or in older plants that must replace inefficient equipment.

Ethanol From Biomass Reduces Costs and Environmental Waste

Biomass can also be converted to ethanol, although commercial-scale ventures are limited by current technology. While biomass requires more handling and sorting before conversion, those costs may be offset by the abundance of biomass relative to corn. Although the production of ethanol from biomass is presently constrained by technological difficulties, new developments in this decade may allow ethanol to be produced from biomass at or below the cost of corn-derived ethanol.

To Order This Report...

The information presented here is excerpted from ***Emerging Technologies in Ethanol Production,*** AIB-663, by Neil Hohmann and C. Matthew Rendleman. The cost is $9.00.

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