



*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

**Give to AgEcon Search**

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*

Economic  
Research  
Service

Agriculture  
Handbook  
No. 671

#10

# Major Statistical Series of the U.S. Department of Agriculture

## International Agricultural Statistics

USDA  
NAT'L AGRICULTURAL LIBRARY  
2001 FEB 14 A 2 04  
CURRENT AGRICULTURE  
ACQUISITIONS

Oct 1987



**Major Statistical Series of the U.S. Department of Agriculture,  
Volume 10: International Agricultural Statistics.** By Stephen R.  
Milmoe, Commodity Economics Division, Economic Research Service, U.S.  
Department of Agriculture. Agriculture Handbook No. 671.

### **Abstract**

This volume describes statistical data and time series dealing with foreign agricultural trade of the United States published by the Agriculture and Trade Analysis Division and the Commodity Economics Division of the Economic Research Service (ERS) and by the Foreign Agricultural Service. It also describes data on production, consumption, and trade for a wide selection of countries and commodities. Finally, it describes the construction of the *World Indexes of Agricultural and Food Production* and *World Food Needs and Availabilities* published by ERS.

### **Keywords**

Trade, production, indexes, exports, imports, outlook, food availability.

### **Sales Information**

Additional copies of this volume of the *Major Statistical Series of the U.S. Department of Agriculture* may be ordered from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Ask for the volume by name. Write to the above address for price information, or call the GPO order desk (202) 783-3238, and charge your purchase to your VISA, MasterCard, or GPO deposit account.

Microfiche copies (\$6.50 each) can be purchased from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. Include the title and series number in your order. Enclose a check or money order payable to NTIS; add \$3.00 for handling for each order. For faster service, call NTIS at (703) 487-4650, and charge your purchase to your VISA, MasterCard, American Express, or NTIS Deposit Account. NTIS will ship rush orders within 24 hours for an extra \$10.00; call 800-336-4700.

## Foreword

This set of 12 volumes on the *Major Statistical Series of the U.S. Department of Agriculture* (Agriculture Handbook No. 671) is the second revision that supersedes the original volumes published during 1957-60. The first revision was completed in 1972.

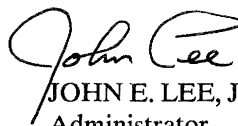
Our goal for this handbook remains essentially unchanged. We hope to help government, university, private sector, and other users become better acquainted with the concepts and data underlying the Department's statistical series. We believe this handbook will benefit new users as well as those already familiar with the Department's statistics. If you find it valuable in improving your knowledge of what the various data series measure and how appropriate they may be for specific uses, we will have largely succeeded.

The challenge for our statistics is to reflect events in the agricultural sector and rural areas as they are, insofar as possible, and in this way contribute to public understanding. Because much has changed in the economics of rural areas and the food and fiber system since the last revision, we have adopted some new procedures. Thus, although the revised handbook describes several established series essentially as they were in the two earlier handbooks, it also notes changes in ongoing series, describes new series, and identifies some series that are no longer published.

Your interest in the Department of Agriculture's statistical series is important. We welcome comments on either these handbook volumes or the series they describe.



CHARLES E. CAUDILL  
Administrator,  
National Agricultural  
Statistics Service



JOHN E. LEE, JR.  
Administrator,  
Economic Research Service

## Volumes in Handbook

Agriculture Handbook No. 671, *Major Statistical Series of the U.S. Department of Agriculture*, will consist of 12 volumes.

1. Agricultural Prices
2. Agricultural Production and Efficiency
3. Farm Income
4. Agricultural Marketing Costs and Charges
5. Consumption and Utilization of Agricultural Products
6. Land Values and Land Use
7. Crop and Livestock Estimates
8. Farmer Cooperatives
9. Market News
10. International Agricultural Statistics
11. The Balance Sheet and Farm Finance
12. Costs of Production

## Glossary

The following organizational abbreviations appear in this publication:

AID	Agency for International Development
ATAD	Agriculture and Trade Analysis Division, ERS, USDA
ASCS	Agricultural Stabilization and Conservation Service, USDA
CCC	Commodity Credit Corporation, USDA
CED	Commodity Economics Division, ERS, USDA
EEC	European Economic Community
EFTA	European Free Trade Association
ERS	Economic Research Service, USDA
FAO	Food and Agriculture Organization of the United Nations
FAS	Foreign Agricultural Service, USDA
OECD	Organization for Economic Cooperation and Development
TEID	Trade and Economic Information Division, FAS, USDA
UN	United Nations
USDA	U.S. Department of Agriculture

## Acknowledgments

Appreciation is extended to the following people who made a significant contribution to this volume:

- Julie Kaston, Foreign Agricultural Service (FAS), Belgrade, formerly Economist, Trade and Economic Information Division, FAS, contributed to the section on Current Foreign Agricultural Statistics.
- Michael Kurtzig, Section Leader, Food Aid Section, Developing Economies Branch, Agriculture and Trade Analysis Division (ATAD), made available statistics for Africa and the Middle East.
- Frederic Surls, Section Leader, Trade Analysis Section, Commodity Trade Analysis Branch (CTA), Commodity Economics Division (CED), provided information on available Chinese statistics.

Appreciation is also extended to the following reviewers for valuable suggestions for improving this volume:

- Cecil Davison, Economist, Fibers and Oils Research Section, Crops Branch, CED;
- Edward Overton, Chief, Agriculture and Trade Indicators Branch, ATAD;
- John Riesz, Assistant Administrator, International Agricultural Statistics, FAS;
- Thomas Warden, Section Leader, Trade Reporting Section, CTA, CED; and
- Mark Smith, Economist, Commodity Trade Programs Section, CTA, CED.

The Economic Statistics Committee of the American Agricultural Economics Association, chaired by Leroy J. Hushak, Professor, Department of Agricultural Economics and Rural Sociology, Ohio State University, arranged for helpful reviews by:

- David Bessler, Professor, Department of Agricultural Economics, Texas A&M University;
- David Orden, Assistant Professor, Department of Agricultural Economics, Virginia Polytechnic Institute and State University; and
- Wesley Peterson, Professor, Department of Agricultural Economics, Texas A&M University.

Edward Reinsel, Office of the Administrator, ERS, USDA, coordinated the preparation of this and other volumes of the handbook. Judith Latham edited the manuscript. Carolyn Riley designed the cover and art work. Judith Placer and Janet Sayre typed the manuscript, and Patty Beavers prepared the camera copy.

## Contents

	Page
<b>Introduction</b> .....	1
<b>U.S. Agricultural Trade Statistics</b> .....	3
Agricultural Exports .....	4
Agricultural Imports .....	7
Outlook for U.S. Agricultural Exports .....	8
Selected Price Series .....	8
Trade-Weighted Indexes of the Foreign	
Exchange Value of the Dollar .....	9
Quantity Indexes of U.S. Agricultural	
Exports and Imports .....	9
<b>Agricultural Statistics of Foreign Countries</b> .....	11
World Agricultural Trade Data .....	11
Foreign Country and Regional Statistics .....	11
Current Foreign Agricultural Statistics .....	12
Miscellaneous International Agricultural Data .....	14
<b>Indexes of Agricultural and Food Production</b> .....	15
<b>Agricultural Outlook and</b>	
Domestic Situation and Outlook Reports .....	17
<b>World Food Needs and Availabilities</b> .....	18
<b>World Agricultural Supply and Demand Estimates</b> .....	20
<b>References</b> .....	21

# Major Statistical Series of the U.S. Department of Agriculture

## Volume 10: International Agricultural Statistics

Stephen R. Milmoe

### Introduction

U.S. agriculture's dependence on foreign markets increased dramatically during the seventies. A number of factors favorable to the export sector came together in the early seventies and continued throughout the decade. Accelerated income growth fueled the demand for better diets, much of which was directly or indirectly met by the U.S. farm sector. Crop failures, particularly in the Soviet Union, were more likely to be met by greater imports. Exchange rates were allowed to float beginning in 1971, which made U.S. exports more competitive. The result was a sixfold increase in U.S. farm exports, from \$7.3 billion in 1970 to \$43.3 billion in 1981. The dependence on exports was apparent in the early eighties, a period marked by a strong dollar, global recession, and greater foreign competition. As a result, exports fell to \$26.0 billion in 1986.

A record 26 percent of U.S. farm production (measured by gross cash income) was exported in 1981, compared with 12 percent in 1970. This figure fell to 15 percent in 1986 with declining exports and record farm output. The output from nearly 2 of every 5 acres was exported in 1981 and again in 1984, in contrast to 1 in 5 acres a decade earlier. By 1986 this figure had fallen to 3 in 10 acres. Two-thirds of U.S. wheat and rice, a third of corn, sorghum, and tobacco, and half of soybeans and cotton are exported annually. A continuous flow of up-to-date foreign trade statistics for the United States and other countries provides a basis for determining agricultural and trade policies and planning for business operations.

To provide extensive coverage of U.S. and world agricultural trade, the U.S. Department of Agriculture (USDA) provides various statistical series on international and U.S. foreign agricultural trade. These data are originally generated by the U.S. Department of Commerce, Bureau of the Census (hereafter the Census Bureau), and are reformatted to meet USDA's needs. Some of the more widely used, regularly published statistical series include U.S. agricultural exports and imports, U.S. agricultural exports under concessional sales (P.L. 480) and credit sales of the Commodity Credit Corporation (CCC), quantity indexes of agricultural trade, price series for commodities of international significance, agricultural trade of the principal foreign countries, and transshipments of U.S. agricultural products through Canada and the principal European transshipment points.

These statistical series originate largely in the Economic Research Service (ERS) and the Foreign Agricultural Service (FAS). This volume describes the major data outputs of these two USDA agencies. It is an update of the *Major Statistical Series of the U.S. Department of Agriculture: Foreign Trade, Production, and Consumption of Agricultural Products* published in 1972 (8).<sup>1</sup>

First, the volume describes the statistical data and time series dealing with the foreign agricultural trade of the United States published by the Agriculture and Trade Analysis Division (ATAD) and the Commodity Economics Division (CED) of ERS. It then describes data on

---

The author is an economist with the Commodity Economics Division, Economic Research Service, U.S. Department of Agriculture.

---

<sup>1</sup>Italicized numbers in parentheses refer to items in the references at the end of this volume.



production, consumption, and trade for a wide selection of countries and commodities. It describes the construction of the World Food Production Indexes published by ATAD.

The volume describes international information contained in two USDA publications series: *Agricultural Outlook* (AO) (9) and domestic situation and outlook reports. It outlines the purposes and construction of the *World Food Needs and Availabilities* report (15). Finally, it describes the major statistical publications of FAS, whose commodity circulars cover approximately 20 areas from grains to horticultural products. The frequency of the FAS reports ranges from two to three per month for grains to two to three per year for coffee. These reports customarily include most of the current area, yield, production, and trade statistics by marketing year. Considerable emphasis is placed on recent, often-estimated data provided largely by the Agricultural Attaché Service covering about 100 countries. Statistical coordination between FAS and ERS is designed to maintain uniformity in foreign agricultural statistics published by USDA.

USDA relies on agricultural counselors and attachés as well as major international or regional organizations such as the Food and Agriculture Organization of the United Nations (FAO), United Nations (UN) trade data, and the Organization for Economic Cooperation and Development (OECD) for many of its foreign agricultural statistics. For information on how these data are gathered, one should consult those sources. However, many agricultural data and time series generated in USDA have been developed to satisfy specific needs originating in the United States, and they rely on sources other than international organizations. Sources include attaché reports, national statistical documents of foreign countries, and other sources. Analysts often need current statistics for which the time lag of international organizations is

excessive. Sometimes the form or coverage of data provided by international organizations is not appropriate. These diverse sources are customarily cited, and specific peculiarities or methodological difficulties are explained when necessary.

The major sources of statistical time series on world agricultural trade, production, and consumption cover two types of time series: production statistics and the value of agricultural trade.

Most production statistics are in the *Production Yearbook*, published by FAO (6). It is the basic international source on area and production of agricultural commodities. It is published annually in late summer and reflects the preceding year's production.

The value of agricultural trade series is published in the *Trade Yearbook*, which gives historical data on imports and exports of individual agricultural commodities (7). Each issue includes time series on value and volume for groups of specified commodities, defined in terms of the Standard International Trade Classification (SITC) for 3-6 years. The United Nations' *Commodity Trade Statistics* (5) and OECD's *Trade by Commodities* (2) publish detailed data by origin and destination. National governments, the UN, OECD, and UN Regional Economic Commissions publish detailed statistics on quantities and values of trade in all commodities, agricultural and nonagricultural.

The national statistical publications of the various nations are the basic source of detailed agricultural production, trade, and consumption statistics, and time series. The quality, completeness, and timeliness of these publications vary greatly, often making comparisons difficult. However, data users should consult the publications for methods used and peculiarities of the series.

## U.S. Agricultural Trade Statistics

The foreign trade statistics described in this section are published by ERS in the bimonthly *Foreign Agricultural Trade of the United States (FATUS)* and its fiscal- and calendar-year supplements (10).

U.S. agricultural trade statistics consist of monthly, calendar-year, and fiscal-year data based on compilations of the Census Bureau. These compilations classify imports into commodities according to the *Tariff Schedule of the United States Annotated* (TSUSA) and the shorter Schedule A, Statistical Classification of Commodities Imported into the United States (24). Exports are classified according to Schedule B, Statistical Classification of Domestic and Foreign Commodities Exported from the United States (table 1). Schedule B is based on the framework of the classification system in TSUSA. The Schedule B data are rearranged and presented in terms of commodity groupings and major commodities in Schedule E, which is based on the Standard International Trade Classification (SITC), Revision 2, to permit international comparisons. Schedule A is also based on SITC. Before January 1978, the export classifications were based on the organizational framework of the former SITC. A Harmonized System of commodity codes goes into effect on January 1, 1988. This new system is intended to facilitate comparisons among countries.

ERS further condenses agricultural items in Schedules A and B into commodity groupings for monthly publication, and it publishes fiscal- and calendar-year agricultural trade data according to those economic groups (table 2). Additional data on exports under specified Government programs, export assistance, and exports transshipped via

Canada, the Netherlands, and Belgium to other countries of ultimate destination are based on USDA compilations.

Agricultural commodities in the trade series issued by USDA consist of: (1) food products, excluding marine food products; (2) other products of agriculture that have not passed through complex processes of manufacture, such as raw hides and skins, fats, oils, starches, beer, and wines; and (3) selected nonagricultural commodities generally used as production inputs, such as fertilizer, pesticides, and farm machinery. Manufactured products such as textiles, leather, cigarettes, and distilled alcoholic beverages are not considered agricultural, nor are forest and naval store products. Export and import statistics are the official U.S. trade data (quantity and value) based on compilations of the Census Bureau.

Export and import statistics reflect movements into and out of the U.S. Customs Area (including the 50 States, the District of Columbia, and Puerto Rico). They thus exclude the following categories: shipments between the United States and Puerto Rico; trade between the U.S. Customs Area and U.S. possessions, including the Virgin Islands, and between Puerto Rico and the Virgin Islands; exports to U.S. armed forces and diplomatic missions abroad for their own use; supplies to vessels and planes engaged in foreign trade; imports into U.S. possessions; U.S. goods returned to the United States by the armed forces; and intransit shipments through the United States when documented as such with the U.S. Bureau of Customs.<sup>2</sup>

<sup>2</sup>See (23) for more detailed current information on sources, documentation, accuracy, estimation of low-value shipments, compilation, and presentation.

**Table 1—U.S. agricultural exports: Quantity and value by commodity (October-September)**

Schedule B	Quantity		Value	
	1984/85	1985/86	1984/85	1985/86
	----- <u>Number</u> -----		---- <u>1,000 dollars</u> ----	
1000260 Turkeys	866,945	1,764,176	876	1,456
1000280 Ducks, geese, and guineas	1,236,033	882,085	921	534
1001000 Chickens, ducks, geese, etc.	1,339,425	2,184,245	2,069	2,850
1004120 Cattle-beef, breeding males	13,018	9,047	13,522	13,890
1004140 Cattle-beef, breeding females	20,349	21,940	21,449	30,235
1004160 Cattle-dairy, breeding males	4,754	4,869	5,672	8,586
1004180 Cattle-dairy, breeding females	37,947	37,973	44,479	51,7491
1004190 Cattle not for breeding	44,389	31,409	21,323	16,532
1007100 Horses for breeding	1,944	1,730	18,287	28,178

Source: (10, Fiscal 1986 Annual Supplement).

Table 2—U.S. agricultural exports: Value of selected commodities

Commodity	October-September		Change
	1984/85	1985/86	
	----- 1,000 dollars -----		Percent
Total agricultural exports	31,200,798	26,324,337	-16
Animals and animal products	4,075,478	4,367,188	7
Animals live, except poultry	255,241	344,279	35
Cattle and calves, live	106,445	120,992	14
Horses, mules, burros, live	119,013	202,596	70
Swine, live	7,971	9,639	21
Other live animals	21,812	11,051	-49
Meats and meat products	905,628	1,012,383	12
Beef and veal	477,522	539,056	13
Beef and veal, fresh or frozen	462,125	524,393	13
Beef, prepared or preserved	15,397	14,662	-5
Horsemeat, fresh, chilled, frozen	35,709	43,513	22

Source (10, Fiscal 1986 Annual Supplement).

### Agricultural Exports

Agricultural exports reported in FATUS relate to domestic products grown or produced in the United States and to commodities of foreign origin changed in the United States from the form in which they were imported or enhanced in value by further processing. Sugar refined in this country from imported raw sugar and instant coffee prepared from imported green coffee are examples of commodities that are considered domestic for statistical purposes when they are exported to a foreign country. When material of foreign origin is imported into the United States and incorporated with U.S.-produced material, the final product is considered domestic.

Six hundred Schedule B codes are currently classified as agricultural products from a total of approximately 4,400 codes. The agricultural codes are summarized into a number of commodity groups for analytical purposes: animals and animal products, hides and skins, dairy products, grains and feeds, wheat and wheat products, fruits, nuts, vegetables, and oilseeds and products. Country data may be arranged into regional groups and trade blocs, such as Latin America and the European Economic Community (EEC).

Data on shipments valued at less than \$1,000 are not shown by commodity; they are excluded from agricultural statistics, but are reflected in nonagricultural and overall total trade in the statistics issued by the U.S. Department of Commerce. Agricultural export statistics include shipments under the Agricultural Trade and Development Assistance Act, Public Law 83-480 as amended (P.L. 480), and related laws under Public Law 87-195 (P.L. 195), Section 416 of the Agricultural Act of 1949, and the Act for International Development. ERS

compiles Government-financed program statistics (mostly P.L. 480) from data obtained from the operating agencies (13).

The export value is generally equivalent to a free-alongside-ship (f.a.s.) value at the U.S. port of export, based on the transaction price and including inland transportation, insurance, and other costs incurred in placing the merchandise alongside the carrier. The country of destination is defined as the country where goods are to be consumed, further processed, or manufactured. If the exporter does not know the ultimate destination, shipments are credited to the last country to which the commodities are known to have been shipped in their present form.<sup>3</sup>

Because agricultural products are transshipped through ports such as those on the lower St. Lawrence Seaway and in Rotterdam, Amsterdam, Hamburg, and Antwerp, the exporter cannot determine the final destination for many agricultural commodities at the time of shipment. Estimates of these transshipments by commodity and country of destination are based on information obtained from grain inspections and from transshipment statistics obtained from the Netherlands and Belgium.

### Monthly and Quarterly Trade Data

The bimonthly FATUS provides data on U.S. foreign agricultural trade emphasizing the current status of U.S. agricultural trade, including food-aid shipments, price developments, and special articles. FATUS summarizes

<sup>3</sup>The source of information on export shipments is the Shipper's Export Declaration, Commerce Form 7527-V, which exporters are required to file with Customs officials.

cumulative commodity data by quantity and value. It gives country totals from October 1 of the current fiscal year and from the corresponding period of the previous year, except December when it gives calendar-year figures. Data are generally available to ERS 4 weeks after the end of the month in the form of magnetic tapes from the Census Bureau.

ERS also maintains detailed quarterly and annual data for dollar sales and exports under Government-financed programs (P.L. 480 and P.L. 195) by title, CCC, and barter for overseas procurement.

Export unit values of the primary U.S. agricultural commodities are published in each issue of FATUS. The issues include cumulative export unit values as well as the current month. Export unit values are weighted-average prices of a specific commodity.

### Annual Trade Data

ERS publishes annual data on U.S. agricultural trade in supplements to FATUS by fiscal and calendar year. Detailed tables show quantity and value of annual exports and imports for the 2 most recent years, and they present historical series for major commodities and commodity groups by quantity and value. These supplements provide detailed tables for 2 years, showing major U.S. markets and principal commodities.

### Commercial and Government Program Exports

USDA has provided a continuous series on agricultural exports under Government programs and commercial sales for dollars since 1954. P.L. 480 is the major Government program providing food and other U.S. farm products to needy nations. Several methods of providing food aid have been used (table 3). Sales for foreign currency were made before fiscal 1974. Under Title I, long-term dollar and credit sales are made in convertible foreign currency. Under Title III, the Title I debt may be

forgiven if the recipient country meets certain conditions. Under Title II, donations are made to foreign governments by private voluntary agencies and under World Food Program agreements.

Government program statistics also include shipments under Mutual Security programs of the Agency for International Development (AID). Before 1954, most Government program exports were authorized under Mutual Security programs, and they were included in reports in AID publications. Government program exports under barter for strategic materials were included from fiscal year 1955 through 1969. Certain agricultural commodities may also be exported as donations under authority of Section 416 of the Agricultural Act of 1949, as amended.

These series published by ERS show Government assistance to agricultural exports through P.L. 480 sales and grants, Section 416 donations, and Mutual Security programs. FAS maintains a series on the quantity and value of exports by country and by commodity under P.L. 480 Title I and Title III. That series is combined with a similar one on exports through Title II programs and with a series showing exports under Section 416 and Mutual Security programs.

The terms "commercial exports" or exports "outside specified Government financed programs" refer to the residual obtained when exports under P.L. 480, Section 416, and Mutual Security programs are deducted from total agricultural export statistics obtained from the Census Bureau. Commercial agricultural exports include exports by means of short-term credit sales, credit guarantees by the CCC and Export-Import Bank, and barter for overseas procurement.

Other export-payment assistance is sometimes made to the exporter in kind (e.g., the Export Enhancement Program), in cash, or by sale from Government stocks at lower than domestic prices. Export payment assistance programs

Table 3—P.L. 480 fiscal-year report: Type of program, by year

Year	Dollar credit	Government to government	Voluntary relief	Barter, world food	Foreign donations Section 416	AID <sup>1/</sup>	Total
<u>1,000 dollars</u>							
1980	865,326	82,661	254,386	139,232	0	182,744	1,524,349
1981	789,668	86,167	301,670	155,445	0	159,050	1,492,000
1982	722,486	40,473	226,699	117,936	0	82,256	1,189,850
1983	809,702	67,418	207,047	110,577	0	129,837	1,324,581
1984	762,678	68,653	212,503	73,839	45,828	103,805	1,267,315
1985	928,186	221,796	303,788	172,718	279,346	89,840	1,995,674
1986	589,280	51,402	214,321	105,927	136,525	131,364	1,228,819

<sup>1/</sup>Agency for International Development.

counteract heavily subsidized exports by other countries to traditional U.S. markets. Although these programs have not been continuous, ERS publishes information on them when it is available.

ERS compiles reports and analyses of Government program, commercial, and total exports from information obtained from several agencies:

- Title I and Title III, P.L. 480 sales for local currency and long-term credit sales for dollars and convertible local currency, from FAS.
- Title II, P.L. 480 donations under government-to-government arrangements and donations through voluntary agencies and the World Food Program, from the Agricultural Stabilization and Conservation Service (ASCS).
- Section 416 exports, from ASCS.
- Purchases under CCC credit sales or credit guarantee programs, from FAS.
- Exports under AID programs, from the Bureau of Program Policy Coordination, AID. This report is part of a data processing system maintained in the Financial Management Division, Office of the Comptroller, AID.
- Agricultural exports, from the Census Bureau.
- Exports of other Government-assisted programs, from ASCS.

Although vigorous efforts are made to improve Government program statistics, the late receipt of documents, especially at the close of the reporting

period, may cause reporting lags by a program agency or by the Census Bureau. The use of estimated values, especially for preliminary reports, causes discrepancies between program values and Census values. The recording by the Census Bureau of exports as going to the country through which transshipment is made, rather than to the final destination, is another source of discrepancies.

Revised reports for all concessional programs (except AID's) are made 1 year later and show all shipments and export values based on invoices received by ASCS. Annual reports released in FATUS include all available revisions in program data and Census data.

### Estimated Export Shares by State

A series begun in November 1964 estimates the value of U.S. agricultural commodities exported by State of origin (table 4). This series makes no estimates by destination.

Because records are generally not kept on the interstate flow of U.S. agricultural products, State export shares are estimated based on a State's share of national production or sales of a commodity. For some commodities, additional information is used, where appropriate, to more accurately reflect exports by State.

This statistical series on export shares by State usually appears in the March/April issue of FATUS and shows the previous fiscal year's estimate and revisions for the prior year.

### Export Shares of U.S. Domestic Production

Export Shares of U.S. Domestic Production is an annual series based on fiscal-year exports and calendar-year domestic production, in physical quantities. For example,

**Table 4—U.S. agricultural exports: Estimated value by commodity group and State**

State and year <sup>1/</sup>	Wheat and products	Rice	Feed grains and products	Soybeans and products	Sunflower seed and oil	Peanuts and products	Cotton and lint
Million dollars							
Alabama:							
1984	36.8	0	0	138.4	0	28.8	56.6
1985	25.4	0	0	81.4	0	34.8	67.7
1986	25.6	0	0	73.9	0	33.6	28.1
Arizona:							
1984	87.9	0	0	0	0	0	238.9
1985	56.8	0	0	0	0	0	179.6
1986	26.8	0	0	0	0	0	53.4
Arkansas:							
1984	141.8	406.0	0	324.4	0	0	100.0
1985	105.7	280.7	0	287.0	0	0	92.7
1986	36.5	296.5	0	260.4	0	0	36.2

<sup>1/</sup>Year ending September 30.

Source: (10, Mar./Apr. 1987).

winter and spring wheat harvested in 1984 would be associated with fiscal 1985 exports. The series covers 19 commodities (wheat, rice, corn, sorghum, soybeans, sunflowerseed, tallow, cotton, tobacco, almonds, peanuts, walnuts, dried beans, hops, prunes, apples, poultry, pork, and beef) for the 5 most recent years.

Tables showing exports, domestic production, and export percentage shares appear annually in the January/February issue of FATUS. The text includes information on the overall share of exports. ERS measures this proportion by taking the farm value of U.S. exports and dividing it by gross cash farm income.

### Transshipments

When exporters do not know the final destination for commodities destined for transshipment ports, ERS credits such shipments to the last country to which the exporter knows the merchandise will be shipped before anyone processes the commodity. Therefore, agricultural export statistics collected by the Census Bureau tend to be overcounted for some countries, primarily Canada, Belgium, and the Netherlands, and undercounted for others. Even with adjustments, Canada and the Netherlands are consistently among the top 10 markets while Belgium is generally in the top 20.

To provide data needed to adjust these statistics, ERS has made annual estimates on the transshipments of U.S. agricultural exports by commodity since 1955. These estimates are based on official data from the port or country of transshipment. In the past 30 years, the volume of transshipments through these ports has grown rapidly with the introduction of large bulk carriers and the opening of the St. Lawrence Seaway (1959).<sup>4</sup>

Detailed data on transshipments by countries of destination appear periodically in FATUS and its annual supplements. These supplementary tables indicate transshipments through Canada, the Netherlands, Belgium, and West Germany. The tables contain data based on information acquired from Government and other sources.

### Agricultural Imports

U.S. agricultural imports for consumption include entries into the U.S. Customs area for immediate consumption and withdrawals from bonded warehouses for domestic consumption. Imports that are partly competitive or

<sup>4</sup>Rotterdam, Amsterdam, Antwerp, and Hamburg have developed storage and transit facilities to distribute large shipments of grain, oilseeds, cotton, and tobacco to other European countries. Ports in eastern Canada along the St. Lawrence Seaway serve as transshipment points for U.S. grain and oilseeds moving from Midwestern States.

interchangeable with U.S. products are considered "supplementary" imports. Noncompetitive items are considered "complementary" imports. The principal complementary agricultural imports are coffee, rubber, cocoa beans, carpet wool, bananas, certain spices, tea, and some other tropical products (table 5).

In 1985, nearly 2,000 code numbers in the Tariff Schedule of the United States Annotated (TSUSA) were classified as agricultural products from a total of about 10,000 TSUSA codes. As with export summaries, TSUSA provides commodity group summaries for important groupings such as animals and animal products, meats and preparations, oil-bearing materials, vegetables, and fruits. It summarizes these import commodities and groupings by country, trade bloc, and region.

The valuation of agricultural imports is usually based on the export market value in the country of origin (customs value). This value understates the total cost of U.S. imports to the extent that it excludes import duties, ocean freight, marine insurance, and other incidental costs of importing the product into the United States. However, microfiche versions are available on monthly and calendar-year formats showing imports on a cost-insurance-freight (c.i.f.) basis. Data on imports valued at \$1,000 and under are estimated from a 1-percent sample. These data are not included in the commodity details, but are included in separate Schedule A and TSUSA commodity codes, which contain both agricultural and nonagricultural products. The country of origin is the country where the commodity was grown or produced. If the country of origin is not known, imports are credited to the country of shipment.

Information on merchandise imports comes from the import entry and warehouse withdrawal forms that

**Table 5—Value of U.S. agricultural imports, fiscal years**

Year	Competitive	Noncompetitive	Total agriculture
<u>Million dollars</u>			
1975	6,571	2,863	9,435
1976	6,279	4,213	10,492
1977	6,548	6,809	13,357
1978	7,314	6,572	13,886
1979	9,075	7,110	16,186
1980	9,924	7,351	17,276
1981	11,302	5,916	17,218
1982	10,198	5,287	15,485
1983	10,909	5,465	16,373
1984	12,240	6,676	18,916
1985	12,959	6,781	19,740
1986	13,072	7,803	20,875

Source (10, Fiscal 1986 Annual Supplement).

importers are required to file with Customs officials. Statistical factors on country of origin, net quantity, value, and commodity classification are verified by Customs officials on formal consumption and warehouse entries filed for transactions valued over \$500, which are ordinarily subject to examination for Customs appraisal purposes.

### Outlook for U.S. Agricultural Exports

*Outlook for U.S. Agricultural Exports* is a quarterly assessment of U.S. agricultural trade (exports and imports) prospects for the current fiscal year or the year about to begin (17). It is produced jointly by ERS and FAS four times a year (November/December at the Outlook Conference, February, May, and August). The report features historical data as well as forecasts of:

- U.S. agricultural trade balance, with 5 years of historical data plus 1 year of forecast data for export and import value, trade balance, and export volume (table 6).
- U.S. agricultural exports (value by commodity), with 17 commodities/commodity groupings, such as wheat and flour, oilseeds and products, and horticultural products (table 7). The series provides data from October through the most recent month of the current year and the previous year. It also provides historical data for the previous fiscal year and an estimate of the current fiscal year.
- U.S. agricultural exports (volume by commodity), with 19 commodities/commodity groupings such as wheat, corn, soybeans, and poultry meat in a format similar to that of table 7.

- U.S. agricultural exports (value by region), with data for 24 regions/countries such as Western Europe, Eastern Europe, and the USSR in a format similar to that of table 7.
- U.S. agricultural imports (value by commodity), with data on 21 commodities/commodity groupings such as live animals, sugar and related products, spices, and tea.
- U.S. agricultural imports (volume of selected commodities), with data on 13 commodities/commodity groupings such as bananas and plantains, cheese, fresh tomatoes, and wine.

*Outlook for U.S. Agricultural Exports* assesses overall export prospects, prospects by commodity group, economic outlook, and regional highlights.

### Selected Price Series

FAO publishes a statistical series of monthly commodity trade prices in *Agricultural Economics and Statistics* (4). The data become available to U.S. readers only after a considerable time lag (about 3 months after the end of the month with the most recent price quotation). With FAO's cooperation, ERS publishes similar data in FATUS, using the original sources, but with only half the time lag.

Monthly reports with analytical text and covering 10 price series appeared first in the July 1968 issue of FATUS, which showed annual data for fiscal years 1961-68 and monthly data beginning in April 1966. However, the format has changed. FATUS now shows prices for the

**Table 6—U.S. agricultural trade balance, fiscal years**  
(Year beginning October 1)

Item	1981/82	1982/83	1983/84	1984/85	1985/86	Forecast 1986/87
<u>Billion dollars</u>						
Exports	39.1	34.8	38.0	31.2	26.3	26.0
Imports	15.5	16.4	18.9	19.7	20.9	20.0
Trade balance	23.6	18.4	19.1	11.5	5.4	6.0
<u>Million metric tons</u>						
Export volume	157.9	144.8	143.6	125.7	109.6	114.0

Source (17, Feb. 1987).

Table 7—U.S. agricultural exports: Value by commodity

Commodity	October-December		Fiscal 1985/86	Fiscal 1986/87 forecast
	1985	1986		
<u>Billion dollars</u>				
Grains and feed	3.003	2.208	9.648	8.1
Wheat and flour	.860	.644	3.469	3.0
Rice	.170	.144	.648	.5
Coarse grains <sup>1/</sup>	1.529	.879	3.819	2.8
Corn	1.372	.680	3.293	2.1
Oilseeds and products	1.882	2.071	6.439	5.9
Soybeans	1.281	1.429	4.168	3.8
Soybean cake and meal	.286	.407	1.104	1.1
Soybean oil	.070	.032	.291	.3
Livestock and products	.898	.987	3.525	3.7
Poultry and products	.101	.142	.455	.6
Dairy products	.107	.115	.432	.5
Horticultural products	.680	.851	2.667	3.0
Tobacco	.597	.490	1.318	1.2
Cotton and linters	.218	.312	.692	1.8
Seeds	.106	.115	.357	.4
Sugar and tropical products	.182	.222	.788	.8
Total	7.774	7.513	26.319	26.0

<sup>1/</sup>Includes corn, oats, barley, sorghum, rye, and products.  
Source (<sup>17</sup>, Feb. 1987).

most recent month, the previous January's prices, and all intervening months.

ERS publishes 28 price series pertaining to eight leading U.S. agricultural export commodities and four leading agricultural imports, in the bimonthly issues of FATUS. Prices for wheat, corn, and soybeans include average farm price, wholesale price, export price, and landed price, as well as Argentine, Australian, and Canadian prices for similar grades of wheat and corn. Other U.S. prices include sorghum (f.o.b.), rice (f.o.b.), cotton (nine-market average), soybean oil (Decatur and the EEC), and soybean meal (Decatur and the EEC). Prices for imported commodities include coffee, cocoa, sugar, and rubber, all quoted in New York.

Most prices are a monthly average of four or five weekly quotations; a few are monthly averages of eight or nine semiweekly quotations. The export price of Thai rice is averaged from weekly data of the Bangkok Board of Trade, which are transmitted by the U.S. Agricultural Attaché. This export price differs from the FAO price, which is simply one daily quotation late in the month.

FAS publishes several price series in its Weekly Roundup on World Production and Trade. Rotterdam prices, U.S. farm prices, EC intervention prices, and EC import levies are quoted for the major grains and oilseeds on a weekly basis. The series includes the change from a week ago and prices from a year earlier.

#### Trade-Weighted Indexes of the Foreign Exchange Value of the Dollar

Indexes of nominal and real trade-weighted dollar exchange rates measure the percentage changes in currency units per dollar, weighted by the proportion of agricultural exports from the United States, base years 1976-78 for total agricultural exports, soybeans, wheat, corn, and cotton. Real values are computed like nominal values, but they are adjusted for Consumer Price Index (CPI) changes in each country. These indexes are published each month in *Agricultural Outlook* (AO), showing real and nominal indexes for total agricultural commodities as well as for wheat, corn, soybeans, and cotton (1971 = 100) and total nonagricultural commodities (1980 = 100) over the past 12 months (9).

#### Quantity Indexes of U.S. Agricultural Exports and Imports

USDA produces quantity indexes of foreign agricultural trade of the United States, including both exports and imports, by calendar year and fiscal year. Analysts compile these indexes by a weighted aggregative method, using the Laspeyres formula. The export index is based on 46 major commodities and accounted for 92 percent of total U.S. agricultural exports in calendar year 1977. The import index is based on 40 major commodities and accounted for 86 percent of total U.S. agricultural imports in calendar year 1977.



The indexes appear annually in selected issues of FATUS and in the annual supplements. In selecting commodities for inclusion in the index, ERS tries to arrive at a list of practical length, without excluding any important items, judged by their dollar value during the base period and the availability of quantity statistics. Another criterion in the choice of commodities is the homogeneity of Census Bureau classification. Agricultural imports are separated into competitive and noncompetitive groupings.

A historical series of export indexes entitled *Quantity, Price, and Value Indexes of U.S. Agricultural Trade* (3) updates and revises the quantity indexes of U.S. agricultural trade previously published through fiscal year 1977 in various USDA publications. In addition to the quantity indexes that cover 1866 through 1979, this study introduces price and value indexes as further measures of U.S. agricultural trade performance in 1978 and 1979. The report supersedes *Quantity Indexes of U.S. Agricultural Exports and Imports* (11). The revisions and updates also include a methodology that can be computerized.

## Agricultural Statistics of Foreign Countries

The previous section focused on U.S. trade. This one examines production, consumption, trade, prices, and exchange rates from a global perspective. UN, OECD, and individual country data are the primary sources.

### World Agricultural Trade Data

FAS publishes statistics on the quantities of major agricultural products exported and imported by foreign countries in *Foreign Agriculture*, in *World Agricultural Production and Trade*, and in the commodity circulars and monographs of the FAS-M series (19, 20, 22).

Data showing total imports and exports of the 22 developed countries are purchased from OECD. These countries include all of Western Europe, Canada, the United States, Australia, Japan, and South Africa. These data are processed annually, and the agricultural trade data are extracted for the member countries of the EEC and the European Free Trade Association (EFTA). FAS compiles trade data showing agricultural imports and exports for selected commodities by principal countries of origin or destination. The UN annually provides both export and import quantities and the value of agricultural products traded by over 100 countries, including the 22 OECD countries, by calendar year.

Trade statistics obtained from OECD and the UN are reported for commodities based on the SITC. Statistics from OECD are reported on a four-digit code level, and those reported by the UN are reported on a five-digit code level. Some statistics obtained from OECD include manufactured products grouped with agricultural commodities because these data cannot be extracted from the total. Published statistics of OECD and the UN are nearly comparable to U.S. trade data based on Schedule A and B codes. The new Harmonized System will improve comparability of such data.

The statistical series based on OECD begins with 1961 data, and the UN series begins with 1964 data. The data are reported in quantity and value, but import value differs from that reported by the Census Bureau. Most countries value imports c.i.f. However, Australia and the United States report their imports f.o.b. country of origin. Canada reports imports f.o.b. by country of consignment, except for those received from the United States. Canada also reports Caribbean, Central American, and South American goods consigned from the United States that are reported by country of production.

Several countries also report general imports, that is, imports for consumption and imports of commodities moving into bonded storage. U.S. agricultural imports are

reported as both general imports and imports for consumption. Other countries, mainly those in Western Europe, report special imports, which exclude imports destined for re-export. Agricultural exports are reported f.o.b. port of origin and do not include the freight or insurance costs for transporting the commodity from the originating country.

Many countries reporting to the UN and OECD provide trade statistics within a few months of the close of the reporting period. Thus, in past years, ERS has been able to process and publish trade of selected developed countries, such as the EEC countries, within 6 months of the close of the reporting year. The availability of trade statistics for many developing countries, including the Sino-Soviet countries, is less prompt. Trade statistics of some East Asian, African, and Latin American countries do not become available for several years. To fill in this gap, ERS occasionally uses supplementary sources such as FAO trade reports, selected trade publications, the FAS Attaché Service, and trade data published by firms and individual countries.

### Foreign Country and Regional Statistics

ERS works extensively with individual country data by analyzing such material as country yearbooks and information from foreign magazines and newspapers and by contacting overseas representatives.

### World Situation

ERS publishes four issues per year of *World Agriculture Situation and Outlook Report* (14). This report analyzes current world economic conditions, commodity problems and developments, regional and country agricultural policies, trade, and food programs and policies.

Statistical tables and charts are generally part of the analysis. They cover various short- and long-term series on statistics for trade, production, prices, and consumption.

### Regional and Country Situation

ERS publishes annual situation and outlook issues for the following 10 regions: Latin America, North Africa and the Middle East, Sub-Saharan Africa, East Asia, China, South Asia, Southeast Asia, the Soviet Union, Eastern Europe, and Western Europe (12).

These reports vary in content depending on the importance of the issues within each region. The reports generally cover current economic and agricultural

conditions and implications affecting U.S. trade and outlook. Current statistical series include crop area and production, livestock numbers and meat output, agricultural imports and exports, summaries of agricultural and food production indexes, commodity prices, and related agricultural data.

Data for both world and regional publications are primarily from U.S. agricultural attaché reports from foreign countries. Other sources of information include official country publications, news releases, international organizations, travel, and consultations with foreign officials and other knowledgeable experts.

Current year statistics, as well as those for the past 2 or 3 years for crop and livestock output, are preliminary estimates. They are likely to be revised when most countries release final official data several years later. Trade and related agricultural data generally either have shorter lag times for final estimates or become final when first released.

#### **World Trade in Selected Agricultural Commodities**

*World Food Grain Trade, 1962-83: Wheat, Rice, and Wheat Flour* presents historical data on the volume of world trade in food grains for 1962-83 (1). ERS compiles import volume data for 22 years for each country, by source or country of origin, and summarizes the data in regional trade matrices. Data for each commodity appear in condensed trade matrices for the 17 major importing regions and the 6 major exporters. Additional volumes for feed grains and oilseeds are in preparation.

The UN's *Commodity Trade Statistics* represent the primary source of data for the publications mentioned above. These data are available on magnetic tape and in published documents (5). This source is limited to countries reporting their trade statistics to the United Nations (about 100 countries in 1982-85). Where import data for specific countries were not available from the United Nations, ERS obtained these data from the official trade yearbooks of those countries. Estimates for countries not reporting to either source were obtained from export data of their trading partners. The appendix of each commodity report gives the sources of trade data for each year and country.

#### **Current Foreign Agricultural Statistics**

FAS statistics focus on timeliness and include the most recent official data, current estimates, and short-range forecasts of worldwide agricultural production and trade for products important to U.S. agricultural exporters and importers. The data are presented by commodity and country, with special attention to principal markets and

U.S. competitors. Data are frequently presented by marketing year and U.S. fiscal year as well as by calendar year.

FAS develops U.S. export and import data from trade tapes released monthly by the Census Bureau as the source for official U.S. export and import data. FAS also maintains a UN trade database that contains import and export data for countries reporting to the United Nations. For the latest production, supply, and demand data for a particular market, FAS relies on reports from its global network of agricultural attachés and counselors stationed in over 75 countries.

FAS publishes foreign production and trade statistics in numerous reports.<sup>5</sup> Key report series are the circular report series, which includes 18 separate reports; International Marketing Profiles, a compilation of historical trade data, Weekly Roundup on World Production and Trade, U.S. Export Sales Report, and both scheduled and voluntary agricultural attaché reports.

*Foreign Agriculture* is a monthly magazine featuring articles analyzing conditions that affect U.S. agricultural trade and highlighting market development and export promotion activities (19). The feature section has a major article focusing on a particular country or region. Other sections include trade updates, marketing news, and country briefs.

FAS circulars are published periodically and are available by subscription. These reports cover developments on production, supply, and distribution for the United States and the world for many commodities (table 8).

The 18 circulars by title are:

- Dairy, Livestock, and Poultry—
  - Export Trade and Prospects (8 issues)
  - Meat and Dairy Monthly Imports (12 issues)
  - Dairy Situation (2 issues)
  - Livestock and Poultry (12 issues)
- Grains—
  - World Grain Situation and Outlook (16 issues)
  - Export Markets for U.S. Grain (12 issues)
  - USSR Grain Situation and Outlook (12 issues)
- Other—
  - Coffee (3 issues)
  - Cotton (12 issues)
  - Horticultural Products (12 issues)
  - Oilseeds and Products (13 issues)

---

<sup>5</sup>For information about these reports, contact the FAS Information Division, U.S. Department of Agriculture, Washington, DC 20250.

Table 8—World wheat supply/demand

Year	Area harvested	Yield	Production	World trade	Utilization total	Ending stocks
	Million hectares	Tons per hectare	-----Million metric tons-----			
1975/76	225.4	1.58	356.6	66.7	356.3	64.2
1976/77	233.2	1.81	421.4	63.3	385.9	99.8
1977/78	227.1	1.69	384.1	72.8	399.4	84.2
1978/79	228.9	1.95	446.8	72.0	430.2	100.9
1979/80	228.3	1.86	424.5	86.0	444.3	81.0
1980/81	237.0	1.87	443.0	94.1	445.8	78.2
1981/82	238.7	1.88	449.5	101.3	443.6	87.0
1982/83	237.7	2.01	477.5	98.7	462.2	102.3
1983/84	229.2	2.14	489.5	102.0	482.3	109.5
1984/85	231.4	2.21	511.5	106.9	494.9	126.1
1985/86	229.1	2.18	498.8	85.0	487.6	137.3
1986/87	227.8	2.29	522.5	84.9	504.9	155.0

Source (20, Jan. 1987).

Seeds (4 issues)  
 Sugar, Molasses, and Honey (3 issues)  
 Tea, Spices, and Essential Oils (3 issues)  
 Tobacco (12 issues)  
 World Crop Production (12 issues)  
 Cocoa (2 issues)  
 Wood Products (4 issues)

The international marketing profile series compiles U.S. Census trade data and UN trade data as reported by member countries. Profiles are available by country and commodity groupings and provide volume, value, and U.S. market share by calendar year. The profiles are a useful reference for exporters engaged in market research.

The U.S. Export Sales Report, issued weekly, summarizes sales and exports of major U.S. agricultural commodities based on reports from private exporters. World Production and Trade, also published weekly, offers current news items and trade statistics on various commodities and a summary of recent developments in world production and trade.

Attaché reports offer country-specific information reported by FAS personnel stationed overseas. The reports concentrate on production of major crops, especially for competitor countries, and market opportunities for U.S. agricultural exports.<sup>6</sup>

The Trade and Economic Information Division (TEID) makes the following special reports available:

<sup>6</sup>Attaché reports may be purchased by the public through FAS's Reports Office.

- U.S. Trade System—Both export and import data are available in 2- and 5-year comparison formats. Various combinations of commodity, country, and customs district reports are available (table 9).
- UN Trade System—Annual data from 1962 to the present on 160 reporting countries with 232 partner countries. Six report formats are available with value, volume, and market shares information.
- UN Trade Quarterly System—Quarterly data from 1978 to the present. Statistics are reported on SITC basis, second revision. Four report formats are available.
- Economic Demand Database—This database was developed for analysts who need rapid access to macroeconomic data. The data are available only through Statistical Analysis Systems (SAS) programs. System use requires basic SAS programming skills.
- P.L. 480 Database—Annual data for 1965-86 are available through SAS programs. These reports present a statistical summary of agricultural exports made under food aid programs authorized by P.L. 480. Reports show country detail for each commodity. The country reports show commodity detail for each country. Both reports are a single-year format. Data are available by calendar and fiscal year. Most tables are accessible by an on-line prompter, although specialized tables require basic SAS programming skills.

**Table 9—Value of U.S. agricultural exports to Japan, by processing stage and commodity group**

Processing stage and commodity group	Calendar year		
	1982	1983	1984
<u>1,000 dollars</u>			
Unprocessed products:			
Grain and feed products	2,106,133	2,495,208	2,876,270
Oilseed products	983,600	1,218,578	1,181,221
Cotton, tobacco, and seed products	543,674	550,524	646,248
Horticultural products	201,415	226,722	254,931
Dairy, livestock, and poultry products	17,589	15,382	14,684
Sugar and tropical products	6,565	4,523	6,805
Subtotal	3,858,976	4,510,936	4,980,160
Processed products:			
Dairy, livestock, and poultry products	854,395	883,085	966,866
Cotton, tobacco, and seed products	309,920	327,618	285,979
Horticultural products	244,171	244,934	234,085
Grain and feed products	129,040	145,564	171,369
Oilseed products	88,987	74,760	64,791
Sugar and tropical products	61,700	53,911	51,291
Subtotal	1,688,214	1,729,873	1,774,380
Total	5,547,189	6,240,810	6,754,540

Source (21).

- Production, Supply, and Distribution Database—This database provides current and historical data on the production, supply, and distribution by country for major commodities maintained by FAS. Major grain, oilseed, and cotton items are updated monthly; others are updated as needed by FAS. These data are available on magnetic tape.<sup>7</sup>
- The publication, *Agricultural Statistics of the People's Republic of China, 1949-82* (25), which will be updated every 3 years.
- Copies of the database in spreadsheet form, available to interested researchers who contact the China section of ATAD.

#### Miscellaneous International Agricultural Data

Regional branches within ERS occasionally prepare staff reports or Foreign Agricultural Economic Reports (FAER's) as a result of a demand for specific information.

#### Data on China

ERS maintains an extensive database of national time series and of provincial data for China, covering area, yield, production, inputs, foreign trade, and macroeconomic factors such as income and consumption.

ERS disseminates this database in two ways:

<sup>7</sup>Contact the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. (To expedite service, call the NTIS Order Desk (703-487-4650).

#### Data on Africa and the Middle East

ERS maintains an extensive database on the supply and distribution of grains and on other macroeconomic indicators, and it supplies grain export data for most of the countries of Africa and the Middle East based on partner-country data. The time series begins in 1966 and includes 1985 and 1986 estimates. The data are available on floppy disks. Data are now available for purchase on Nigeria, Egypt, and Turkey. Data on Israel, Saudi Arabia, South Africa, Zimbabwe, Sudan, and Madagascar are in preparation and will be available shortly.<sup>8</sup>

<sup>8</sup>Data on other countries are being prepared. Disks for some countries are available for sale from ERS. Contact ERS/Data, Room 228, 1301 New York Avenue, NW., Washington, DC 20005-4788.

## Indexes of Agricultural and Food Production

ERS publishes annual *World Indices of Agricultural and Food Production* (16) for comparison of agricultural production by country and region. It uses production indexes in constant dollars for these comparisons (table 10).

ERS prepares annual indexes of agricultural and food production in foreign countries as part of a continuing assessment of the current world agricultural situation. These indexes measure changes in annual and per capita production.

Production indexes for foreign countries have been published for several decades. Countries and commodities covered, base periods used, and weighting systems have changed substantially over the past 30 years. The description here applies to the current series, which uses 1976-78 as a base period and covers 1950-85. This revised series was first published in 1985 and supersedes all previous issues.

The series lists commodities produced annually in each country by volume. It compares the annual aggregated

value of production with the annual population by calculating a production index per capita.

To eliminate double-counting of feed products as cash grain and as an input into livestock production, ERS derived a livestock deduction in countries where commercial feeding is important.

Official statistics of foreign governments are the primary sources of production statistics. ERS also uses reports of U.S. agricultural attachés, FAO, and other international organizations, and estimates made by country analysts in ATAD for current data.

Indexes of agricultural and food production and per capita production for 111 countries, the world, developed, developing, and centrally planned economic groups, and about 15 geographic regions are published in the annual *World Indices of Agricultural and Food Production* (16). Parts of the series also appear in some quarterly issues of the *World Agriculture Situation and Outlook Report* (14) and in annual regional situation and outlook reports on Asia and Oceania, Africa and the Middle East, Western Europe, and Latin America.

Table 10—Ireland: Production by commodity, value and indexes of agriculture and food production

Commodity	Price weight	Average 1976-78	1981	1982	1983	1984	1985
	Dollars	1,000 metric tons					
Wheat	163	234	230	380	377	585	570
Barley	152	1,257	1,320	1,530	1,403	1,666	1,265
Oats	145	128	94	93	100	131	125
Potatoes	127	1,270	1,000	1,100	700	800	779
Sugar beets	38	1,441	1,315	1,659	1,630	1,639	1,400
Tomatoes	151	26	25	26	26	24	22
Apples	209	11	7	9	10	9	8
Beef and veal	2,064	367	315	344	352	387	387
Mutton and lamb	1,721	42	44	42	40	42	44
Pork	1,461	128	153	155	163	142	133
Poultry meat	808	42	49	53	55	53	54
Cow's milk	181	4,341	4,803	5,165	5,627	5,930	6,000
Eggs	972	38	38	36	38	38	38
Million dollars at constant prices							
Aggregates of production:							
Crops		470.0	434.0	516.5	446.1	537.0	460.4
Livestock		1,872.5	1,895.2	2,021.5	2,133.2	2,231.6	2,235.3
Livestock feed deduction = 0.24		-449.4	-454.8	-485.1	-511.9	-535.5	-536.4
Total agriculture		1,893.1	1,874.4	2,052.9	2,067.4	2,233.1	2,159.3
Total food		1,893.1	1,874.4	2,052.9	2,067.4	2,233.1	2,159.3
1976-78 = 100							
Indexes of production:							
Crops		100	92	110	95	114	98
Total agriculture		100	99	108	109	118	114
Total food		100	99	108	109	118	114
Per capita agriculture		100	94	102	102	109	104
Per capita food		100	94	102	102	109	104
Index of population, 1976-78 population = 3,280,000		100.0	105.2	106.4	107.1	108.3	109.4

Blanks indicate not applicable.  
Source (16, 1976-85).

## Agricultural Outlook and Domestic Situation and Outlook Reports

*Agricultural Outlook*, published monthly, reproduces the following graphs under the heading, "U.S. Agricultural Trade Indicators": U.S. agricultural trade balance, U.S. wheat exports (volume), U.S. corn exports (volume), U.S. soybean exports (volume), U.S. fruit and vegetable exports (volume), total export volume, export prices (weighted index number), foreign supply and use of coarse grains, U.S. share of world coarse grain exports, foreign supply and use of soybeans, U.S. share of world soybean exports (9). In addition, the following tables are published under the heading, "U.S. Agricultural Trade": Prices of principal U.S. agricultural trade products, Indexes of nominal and real trade-weighted exchange rates, Trade balance, U.S. agricultural exports and imports, and U.S. agricultural exports by region.

CED publishes 11 Situation and Outlook Reports by commodity approximately three times a year. Of those 11 commodities, 4 (cotton, dairy, rice, and tobacco) contain data series on international trade not published elsewhere. The following data series are contained in those publications and are updated one or more times a year:

### Cotton—

- Raw cotton equivalent of U.S. textile exports and imports;
- Indexes of prices and price per pound of selected cotton staple lengths, c.i.f. Northern Europe;
- Raw wool content of U.S. textile imports; and
- Australian wool prices.

### Dairy—

- Quarterly dairy exports and imports, milk equivalent, milkfat basis.

### Rice—

- U.S. rice exports by type and by crop year;
- Thailand milled rice prices, f.o.b. Bangkok; and
- Milled rice average c.i.f. quotations, Rotterdam.

### Tobacco—

- Imported foreign-grown leaf stocks by quarters;
- World cigarette output and trade; and
- U.S. cigarette exports to leading destinations.



## World Food Needs and Availabilities

As a result of a Presidential initiative in the summer of 1984, an Interagency Food Aid Analysis Working Group was established to provide the Government with the best possible assessment of food needs in developing countries. *World Food Needs and Availabilities* now serves both as an objective food needs analysis and meets the requirement of P.L. 480, as amended, that "global assessment of food production and needs" be submitted to the Congress (15).

The report includes tables for each country showing: (1) basic food data (supply and utilization), (2) import requirements using two alternative methods, and (3) financial indicators, actual and projected. It also analyzes food needs and availabilities for each country (table 11).

The report provides the executive branch and the Congress with information for making tentative food aid budget allocations. The report and its quarterly supplements also provide detailed updates on food supplies and food needs on both a country-by-country and world basis. This information is useful to program and policy officials of both donor governments and food-aid-recipient countries, to analysts in international organizations, and to researchers in universities and private agencies involved in food aid distribution. The assembly and maintenance of such data is a joint effort of AID and ERS.

Readers of *World Food Needs and Availabilities* need to understand both the issues the report addresses and those it does not address. The report is not an allocation or programming document; it is an objective analytical assessment of food needs. Allocation and programming decisions which are made elsewhere consider subjective factors such as political feasibility.

The assessment in the report refers to the amount of food needed to cover the difference between a country's

domestic food production plus its commercial import capacity, and either of two alternative measures of food need. These alternative measures are status quo and nutrition-based.

The status quo need is based on a country's recently achieved levels of food consumption, whereas the nutrition-based need is based on FAO's published information on minimum recommended dietary intake for each country. The report estimates the maximum absorbable imports if the highest historical levels of per-capita total food use and carryover stocks are to be maintained. Such a level of imports assumes the food-delivery systems in most food-aid-recipient countries were at capacity at the highest historical level. None of these measures, taken individually, adequately reflects the range of objectives of P.L. 480 legislation.

The food needs assessment is based primarily on projections of food production and financial ability to import food. Food production is subject to the vagaries of weather, whereas commercial import capacity is influenced by international commodity and financial markets.

To assess current crop conditions and import capacity, ERS quarterly reviews each country and calculates an updated food needs level for those countries facing conditions significantly different from the assumptions in the basic report. Both the methods and the data used in the calculations are constantly updated. This effort reflects the commitment of the U.S. Government to respond more effectively to countries whose food assistance can be used for humanitarian purposes and in the mutual interest of the recipient country and the U.S. Government.

Table 11--Basic food data, requirements, and financial indicators: Lesotho

## Basic food data

Commodity/ year	Actual or forecast production	Beginning stocks	Net imports	Nonfeed use	Feed use	Per capita total use	Share of diet
	<u>1,000 tons</u>					<u>Kilos</u>	<u>Percent</u>
Major cereals:							
1980/81	193	0	179	348	24	278	
1981/82	195	0	128	304	19	236	
1982/83	123	0	169	273	19	208	
1983/84	122	0	185	288	19	213	
1984/85	140	0	167	288	19	208	
1985/86	195	0	NA	NA	NA	NA	
1986/87	205	NA	NA	NA	NA	NA	
Wheat, 1979-81							22.4
Corn, 1979-81							42.7
Sorghum, 1979-81							11.4
Total, 1979-81							76.6

## Import requirements

Commodity/ year	Production	Total use		Import requirements		
		Status quo	Nutrition-based	Status quo	Nutrition-based	Maximum
		<u>1,000 tons</u>				
Cereal equivalent:						
1985/86	195	327	370	132	175	161
1986/87	205	335	380	0	175	160

## Financial indicators, actual and projected

Year	Exports and other credits	Imports and other debits	Debt service	International reserves	Foreign exchange available	
					Total	Share to major food imports
-----			Million dollars	-----		
						Percent
1980	360	484	5	50	355	7
1981	380	518	4	43	376	8
1982	430	513	11	48	419	8
1983	486	568	12	67	474	6
1984	505	577	20	49	485	NA
1985	527	600	10	49	509	7
1986	539	620	10	49	519	7

Blanks indicate not applicable.

NA = Not available.

Source (15, 1985).

## World Agricultural Supply and Demand Estimates

The *World Agricultural Supply and Demand Estimates* (WASDE) are a monthly assessment of the world grain, oilseed, cotton, and livestock situation and outlook (18). They are prepared jointly by ERS and FAS following the release of the World Crop Production report. WASDE features historical data as well as forecasts of production, imports, domestic use, exports, ending stocks, and season-average market price. Other features include:

- Accompanying text that explains significant changes in the estimates;
- Supply and utilization of major importers and exporters;

- U.S. wheat supply and use by classes;
- U.S. rice distribution by short, medium, and long grain;
- Distribution of ending stocks among farmer-owned, CCC, and free stocks; and
- Reliability of projections over a 5-year period.

The estimates presented in the WASDE are approved by the World Agricultural Outlook Board and are considered official estimates of the U.S. Department of Agriculture.

## References

- (1) Mackie, A.B., S.W. Hiemstra, and S.L. Rosen. *World Food Grain Trade, 1962-83: Wheat, Rice, and Wheat Flour*. SB-734. U.S. Dept. of Agr., Econ. Res. Serv., Oct. 1985.
- (2) Organization for Economic Cooperation and Development. *Trade by Commodities*. Paris, France. Annual issues.
- (3) Tontz, Robert L. *Quantity, Price, and Value Indexes of U.S. Agricultural Trade*. IED Staff Report AGES810917. U.S. Dept. of Agr., Econ. Res. Serv., Sept. 1981.
- (4) United Nations, Food and Agriculture Organization. *Agricultural Economics and Statistics*. Rome, Italy. Monthly bulletins.
- (5) \_\_\_\_\_. *Commodity Trade Statistics*. Rome, Italy. Annual issues.
- (6) \_\_\_\_\_. *Production Yearbook*. Rome, Italy. Annual issues.
- (7) \_\_\_\_\_. *Trade Yearbook*. Rome, Italy. Annual issues.
- (8) U.S. Department of Agriculture. *Major Statistical Series of the U.S. Department of Agriculture*. Vol. 11: *Foreign Trade, Production, and Consumption of Agricultural Products*. AH-365. Apr. 1972.
- (9) \_\_\_\_\_, Economic Research Service. *Agricultural Outlook*. Monthly issues.
- (10) \_\_\_\_\_. *Foreign Agricultural Trade of the United States*. Bimonthly and annual supplements.
- (11) \_\_\_\_\_. *Quantity Indexes of U.S. Agricultural Exports and Imports*. ERS-Foreign 253. Feb. 1969.
- (12) \_\_\_\_\_. *Regional Situation and Outlook Reports*. Annual issues by region and country.
- (13) \_\_\_\_\_. *U.S. Agricultural Exports Under P.L. 480*. ERS-Foreign 395. Oct. 1974.
- (14) \_\_\_\_\_. *World Agriculture Situation and Outlook Report*. Quarterly issues.
- (15) \_\_\_\_\_. *World Food Needs and Availabilities*. Annual issues and semiannual supplements.
- (16) \_\_\_\_\_. *World Indices of Agricultural and Food Production*. SB-669, SB-689, SB-697, SB-710, SB-730, SB-744, SB-759. Updated annually.
- (17) U.S. Department of Agriculture, Economic Research Service and Foreign Agricultural Service. *Outlook for U.S. Agricultural Exports*. Quarterly issues.
- (18) \_\_\_\_\_. *World Agricultural Supply and Demand Estimates*. Monthly issues.
- (19) U.S. Department of Agriculture, Foreign Agricultural Service. *Foreign Agriculture*. Monthly issues.
- (20) \_\_\_\_\_. *Foreign Agriculture Circulars*. Occasional issues.
- (21) \_\_\_\_\_. *U.S. Trade System*. Occasional issues.
- (22) \_\_\_\_\_. *World Agricultural Production and Trade*. Weekly issues.
- (23) U.S. Department of Commerce, Bureau of the Census. *Guide to Foreign Trade Statistics*. Annual issues.
- (24) U.S. International Trade Commission. *Tariff Schedule of the United States Annotated*. Annual issues.
- (25) Whitton, Carolyn L. *Agricultural Statistics of the People's Republic of China, 1949-82*. SB-714. U.S. Dept. of Agr., Econ. Res. Serv., Oct. 1984.