



United States
Department of
Agriculture

Federal Grain
Inspection
Service

Annual Report to Congress, 1989



Authority

The United States Grain Standards Act, as amended, requires the Administrator of the Federal Grain Inspection Service to submit a report on December 1 of each year, to the Senate and House Committees on Agriculture on the effectiveness of the official inspection and weighing system for the prior fiscal year and to develop recommendations for legislative changes to accomplish the objectives of the Act.

The Act also requires the Administrator to submit a summary of valid complaints received and their resolution by the U.S. Department of Agriculture (USDA) during the prior fiscal year from foreign purchasers and prospective purchasers of United States grain. That summary is included as part of the 1989 Annual Report.

Mission

The mission of the Federal Grain Inspection Service (FGIS) is to facilitate the marketing of grain, oilseeds, pulses, rice, and related commodities by establishing descriptive standards and terms; accurately and consistently certifying quality; providing for uniform official inspection and weighing; carrying out assigned regulatory and service responsibilities; and providing the framework for commodity quality improvement incentives to both domestic and foreign buyers.



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Inspection
Service

P.O. Box 96454
Washington, DC
20090-6454

December 1, 1989

Honorable E. (Kika) de la Garza
Chairman, Committee on Agriculture
House of Representatives
Washington, D. C. 20515

Honorable Patrick J. Leahy
Chairman, Committee on Agriculture,
Nutrition, and Forestry
United States Senate
Washington, D. C. 20510

Dear Mr. Chairmen:

In compliance with the United States Grain Standards Act, as amended, the Federal Grain Inspection Service (FGIS) is submitting its fiscal year 1989 Annual Report to Congress. This report summarizes the Agency's functions, responsibilities, program activities, and internal accounting control system.

Public Law 100-518, enacted October 24, 1988, extended the authority contained in section 155 of the Omnibus Budget Reconciliation Act of 1981, and Public Law 98-469, through September 30, 1993. This law allows FGIS to charge and collect inspection and weighing fees, including administrative and supervisory costs; extended the Agency's authority to invest user fees in interest-bearing accounts of United States Government debt instruments; authorized appropriations for standardization, compliance, and international monitoring activities; and expanded the FGIS Advisory Committee.

During fiscal year 1989, FGIS implemented a number of initiatives which reflect the Agency's continued commitment to quality and to meeting the challenges of the future.

- o To meet the increased need for end-product yield and quality information, FGIS began offering soybean oil and protein content testing as an official service of the national grain inspection system.
- o To provide more widespread, cost-effective, quick, and safe aflatoxin detection services, FGIS evaluated, approved and purchased new- technology based commercially-available aflatoxin testing kits for use throughout the national grain inspection system. The approval and adoption of the new technology facilitates its use by all segments of the grain industry.
- o To provide an indication of the presence of sprout damage in wheat, FGIS upgraded and expanded its Falling Number testing service.
- o To improve the supervisory and administrative skills of the FGIS management team, the Agency provided management training to all of its field-based managers.
- o To enhance FGIS research, development, testing, and quality assurance activities, and to ensure that services remain responsive to changing needs and technologies, FGIS committed extensive resources to modernizing and expanding the Agency's Quality Assurance and Research Center in Kansas City.
- o To fulfill the mandate of the Agency's 1988 reauthorization, FGIS completed and presented to Congress, in a timely manner, a study of the effects of including dockage with foreign material as a grading factor for wheat.
- o To aid in determining future actions and programs and to guide the Agency as it responds to the challenges of the future, FGIS developed its first strategic planning blueprint, the FGIS Five-Year Management Plan.



The Federal Grain Inspection Service
is an agency of the
United States Department of Agriculture

Honorable E. (Kika) de la Garza
Honorable Patrick Leahy

FGIS' operating revenues during fiscal year 1989 were \$34.5 million, with obligations of \$34.8 million, yielding a negative net operating margin of \$0.3 million. The total revenues included interest of \$668,663 on investments. The revolving fund closed the fiscal year with an unobligated balance of \$14.3 million.

Administrative and supervision costs represented 22.5% of total program costs, which is below the statutory limit of 40%. Appropriated obligations of approximately \$7.5 million, plus revolving fund obligations of \$34.8 million totalled \$42.3 million, \$4.4 million over fiscal year 1988 total program obligations. The fee-supported activities ended the fiscal year at 82% of the total obligations.

The FGIS Advisory Committee, which was legislatively reauthorized through September 30, 1993, expanded from 12 to 15 members during fiscal year 1989. The Committee continues to provide important, relevant advice to the Administrator regarding the implementation of the U.S. Grain Standards Act. During fiscal year 1989, the Committee met three times to address a variety of issues, including in-transit grain quality; uniform loading plans; soybean oil and protein testing; the FGIS mission statement; financial management; safety; the Office of Technology Assessment's grain study; and research activities. A Subcommittee was also formed to study grain standards in relation to dockage and foreign material, and broken grains.

During fiscal year 1989, FGIS upgraded, modernized, and improved the national grain inspection system. The Agency reaffirmed its commitment to quality by providing the best grain inspection and weighing services possible and by anticipating and meeting the needs of the future.

Sincerely,



W. Kirk Miller
Administrator

Contents

Introduction	i
Outlook 1990: Issues and Concerns	1
Grain Quality Reports	4
Functions and Responsibilities	
<i>Number of Inspections Performed Under the U.S. Grain Standards Act</i>	6
<i>U.S. Agricultural Exports</i>	6
<i>Inspections for Export on Port Area</i>	7
Organizational Structure	8
<i>Oversight Responsibilities</i>	8
<i>Performance of Weighing and Inspection Services</i>	9
<i>Headquarters Organizational Chart</i>	10
<i>Full-Time Permanent Employment History</i>	11
Compliance Division	12
<i>Overview of Compliance Activities</i>	14
Field Management Division	15
<i>Inspection Program Data</i>	17
<i>Weighing Program Data</i>	18
Quality Assurance and Research Division	19
<i>Board of Appeals and Review Activities</i>	21
Resources Management Division	22
<i>Summary of Reported Grain Dust Explosions</i>	23
International Monitoring Program	25
<i>Foreign Grain Complaints Three-Year Summary</i>	25
<i>Summary of Inspection and Weighing Foreign Complaints</i>	27
<i>Summary of Briefings with Foreign Trade and Governmental Teams</i>	29
<i>Summary of Activities Involving Foreign Travel</i>	30
Budget Appendix	33

(Italics denote graphics)

Outlook 1990: Issues and Concerns

End-Use Factors

The Grain Quality Improvement Act of 1986 mandated that FGIS include end-use factors in the U.S. Standards for Grain as appropriate testing methods become available. End-use information, which reflects the intrinsic properties of grain, is becoming increasingly important to end users. However, before end-use factors can be effectively incorporated into U.S. grain standards, new testing methodologies to measure these qualities must be developed. These methods must provide accurate, useful information in a timely, simple, reproducible, and cost-effective manner.

Food Safety

The safety of the Nation's food supply is a major public concern. FGIS ensures food safety by extensively monitoring corn for aflatoxin. The Agency also develops and disseminates comprehensive, objective information about chemical residues in grain. This data is being used by other agencies to establish permissible levels of pesticides in grain at the marketplace. FGIS efforts are improving interagency coordination on food safety issues and are aiding other Federal agencies in improving and broadening their regulatory and educational programs.

Gramm-Rudman-Hollings Act

The Act, if implemented during fiscal year 1990 as presently considered by the Office of Management and Budget, would result in a cut in FGIS programs. This, in turn, would reduce the volume of U.S. grain exports FGIS could officially weigh and inspect. Such budget cuts would not reduce the deficit. Fee accounts, which make up 82 percent of the total operating budget of FGIS, consist of industry-generated fees which do not revert to the U.S. Treasury. Implementation of the Act and subsequent limitation of the volume of grain exported from the United States is inconsistent with the Food Security Act of 1985, which directs USDA to enhance U.S. grain exports.

Grain Quality Reports

For the fifth year, FGIS produced separate export quality reports for wheat, corn, and soybeans. The fiscal year 1989 U.S. Grain Export Quality Report included, for the first time, data about exports of all grains under the Grain Standards Act. The report concluded that while drought during the summer of 1988 had a devastating effect on the size of U.S. crops, it did not adversely affect the quality of exported grain.

U.S. Wheat Export Quality

FGIS analyzed quality data representing 2,480 export wheat lots inspected during calendar year 1988 and addressed each wheat class in a separate section of the report. The report found that:

- o wheat represented 36.2 percent of the total 115.6 million metric tons of grains and oilseeds exported in 1988;
- o wheat exports increased from 31.0 million metric tons in 1987 to 46.9 million metric tons in 1988;
- o total 1988 wheat exports consisted, by class, of approximately 50 percent Hard Red Winter, 18 percent White, 15 percent Hard Red Spring, 14 percent Soft Red Winter, and 2 percent Durum;
- o ninety-six percent of the wheat inspected for export in 1988 was U.S. No. 2 grade or better;
- o average wheat moisture levels decreased or remained the same compared with 1987 levels, except for Hard Red Spring wheat; and
- o average test weight per bushel increased for all classes except Durum.

U.S. Corn Export Quality

FGIS analyzed quality data from 2,313 export corn lots inspected during calendar year 1988. The report concluded that:

- o corn represented 40.8 percent of the total 115.6 million metric tons of grains and oilseeds exported in 1988;
- o total corn exports in 1988 increased by 13.7 percent over 1987 from 41.5 million metric tons in 1987 to 47.2 million metric tons in 1988;
- o average corn moisture and amount of damaged kernels decreased;
- o average broken corn and foreign material increased slightly; and
- o 36.7 percent of corn inspected for export was U.S. No. 2 grade or better, and 63.3 percent was certified as U.S. No. 3 grade.

U.S. Soybean Export Quality

FGIS analyzed quality data from 1,114 export Yellow soybean lots inspected during calendar year 1988. The report determined that:

- o soybeans represented 15.7 percent of the total 115.6 million metric tons of grains and oilseeds exported in 1988;
- o total 1988 soybean exports decreased by 16.7 percent from 1987 levels, from 21.8 million metric tons to 18.1 million metric tons;
- o average test weight per bushel increased, the average amount of damaged kernels decreased, and the average amount of foreign material and split soybeans increased; and
- o approximately 2 percent of the total exported soybeans were graded U.S. No. 1, 90.7 percent were graded No. 2, and the remaining 7 percent graded U.S. No. 3 or lower.

Domestic Crop Quality Reports

FGIS analyzed 11,365 wheat samples, 2,361 corn samples, and 5,449 soybeans samples taken during the first 4 weeks of local harvests across the country to compile the wheat, corn, and soybean domestic quality reports. The reports concluded that the 1988 drought did not adversely affect the quality characteristics measured in official inspections.

Overall wheat quality increased significantly compared with the 1987 crop; moisture content was lower; and protein was higher. The drought appeared to have little impact on the quality characteristics of the 1988 corn crop as inspected under the U.S. Grain Standards Act. However, there was a much higher incidence of aflatoxin present. Effects of the drought were evident, however, in the 1988 soybean crop. Only 14 percent of the samples graded U.S. No. 1 in 1988 compared with 21 percent in 1987.

In response to a growing need for timely, concise information, FGIS produced a preliminary report on the quality of the domestic 1989 Soft Red Winter crop. The report summarized the information in the 1989 domestic report, which will be published in its entirety in the spring of 1990. FGIS will provide similar preliminary reports for other wheat classes, corn, and soybeans.

Functions and Responsibilities

The Federal Grain Inspection Service (FGIS) was created by Congress in 1976 to manage the national grain inspection system and to establish a national weighing program for grain. The goal of creating a single Federal inspection entity was to maintain uniform U.S. standards and weighing procedures for grain in domestic and export trade and to facilitate grain marketing.

FGIS administers uniform, national grain inspection and weighing programs as established by the U.S. Grain Standards Act, as amended (hereafter, the "Act"). The Agency is responsible for establishing and maintaining official U.S. grain standards for: corn, wheat, soybeans, sorghum, barley, oats, rye, flaxseed, sunflower seed, triticale, and mixed grains.

The Act requires a national inspection and weighing system for grain; requires that export grain be inspected and weighed; prohibits deceptive practices and criminal acts with respect to the inspection and weighing of grain; and provides penalties for violations.

As mandated by the Act, FGIS is responsible for establishing official U.S. standards for grain; promoting uniform application of such standards by official inspection personnel; and providing for an official inspection and weighing system for grain.

In administering and enforcing the Act, FGIS:

- o establishes official grain standards based on grading factors and other official criteria for measuring and describing grain quality;
- o establishes methods and procedures, and approves equipment for the official inspection and weighing¹ of grain;
- o provides official original inspection and weighing services at certain export port locations² in the Atlantic, Great Lakes, Gulf, and Pacific Coast States; and official inspection of U.S. grain at certain export port locations in eastern Canada;



1. Official Inspection. The determination--by original inspection, reinspection, and appeal inspection--and the certification by official personnel of the kind, class, quality, or condition of grain under standards provided for in the Act; or the condition of vessels and other carriers or receptacles for the transportation of grain insofar as it may affect the quality of such grain under other criteria approved by the Administrator (the term "officially inspected" shall be construed accordingly).

Official Weighing. (Class X Weighing). The determination and certification by official personnel of the quantity of a lot of grain under standards provided for in the Act, based on the actual performance of weighing or the physical supervision thereof, including the physical inspection and testing for accuracy of the weights and scales, the physical inspection of the premises at which weighing is performed, and the monitoring of the discharge of grain into the elevator or conveyance. (The terms "official weight" and "officially weighed" shall be construed accordingly.)

2. Export Port Locations. Commonly recognized ports of export in the United States or Canada, as determined by the Administrator, from which grain produced in the United States is shipped to any place outside the United States. Such locations include any coastal or border location or site in the United States which contains one or more export elevators, and is identified by FGIS as an export port location.

- o provides appeal inspection services³ in the United States and at certain export port locations in eastern Canada;
- o delegates qualified State agencies to inspect and weigh grain at certain export port locations;
- o designates qualified State and private agencies to inspect and weigh grain at interior locations;
- o provides Federal oversight and monitors the official inspection and weighing of grain by delegated States and designated agencies; and
- o investigates apparent violations of the Act in cooperation with the Office of Inspector General (OIG), and recommends and initiates appropriate action.

Services under the Act are performed, upon request, on a fee basis for both export and domestic grain shipments.

Mandatory Services

Under provisions of the Act, grain exported from export port locations must be officially weighed. A similar requirement exists for inspection except for grain which is not sold or described by grade. The Act also requires that intercompany-barge grain received at export port locations be officially weighed. Grain exporters shipping less than 15,000 metric tons of grain abroad annually are exempt from mandatory official inspection and weighing requirements. Grain exported by train or truck to Canada or Mexico is also exempt from official inspection and weighing requirements.

Mandatory official inspection and weighing services are provided on a fee basis at 61 export elevators by approximately 547 FGIS full- and part-time employees. Eight delegated States with approximately 2,084 employees provide official services at an additional 27 export elevators under direct FGIS oversight.

Permissive Services

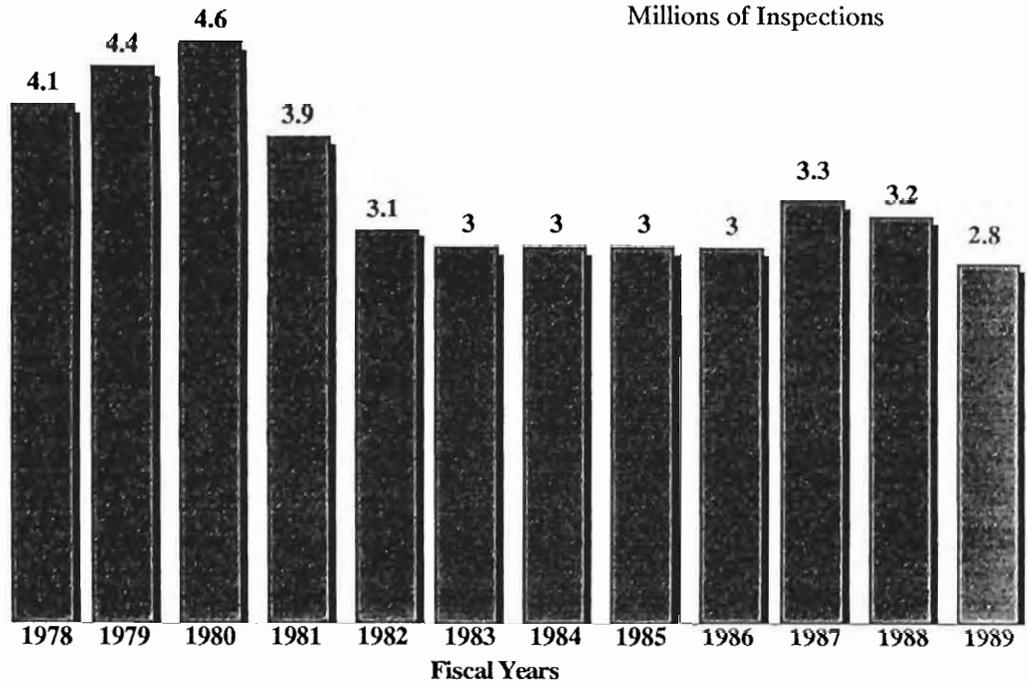
Official inspection and weighing of U.S. grain destined for domestic consumption, with few exceptions, are performed upon request and require payment of a fee by the applicant for services. Domestic inspection and weighing services are provided by 77 designated agencies which employ approximately 4,208 personnel who are licensed by FGIS to provide such services in accordance with regulations and instructions. FGIS supervisory and administrative costs have been funded by user fees since October 1, 1981.

Under the Agricultural Marketing Act of 1946, FGIS administers and enforces certain inspection and standardization activities related to grain products, including flour and corn meal, as well as other agricultural commodities such as rice and pulses. Services under this act are performed upon request on a fee basis for both domestic and export shipments either by FGIS employees, individual contractors, or through cooperative agreements with States.

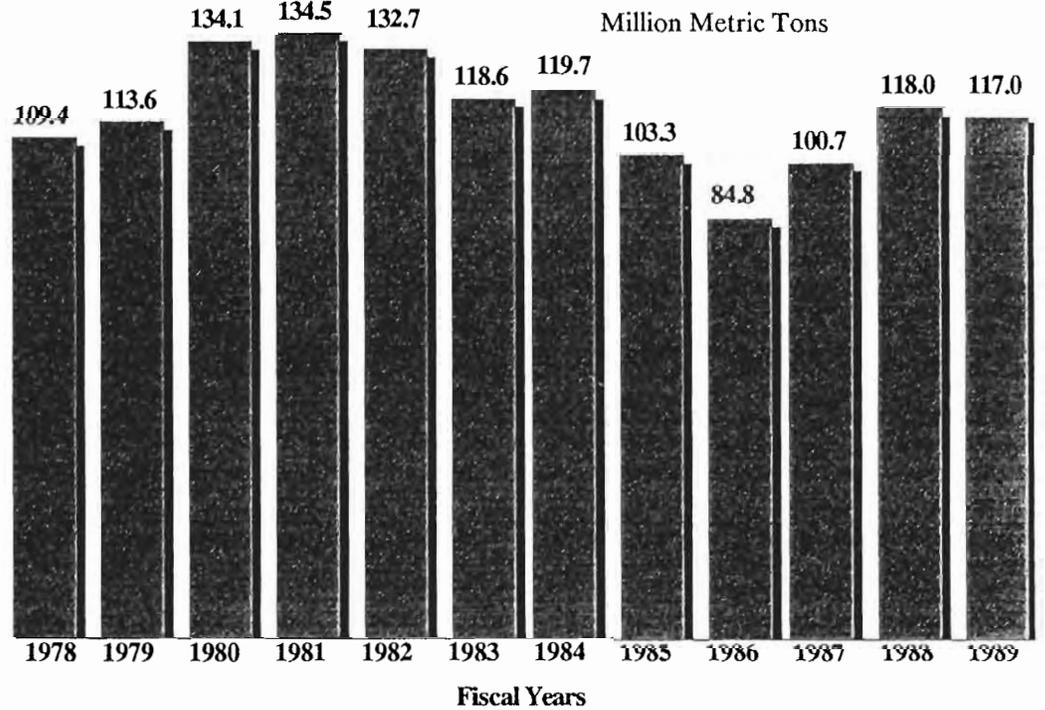


3. Appeal Inspection Service. Official review of the results of an original inspection service or reinspection service may be performed when discrepancies are alleged between the true quality of the grain and the inspection results. The first review may be performed by a field office; these results then may be reappealed to the Board of Appeals and Review.

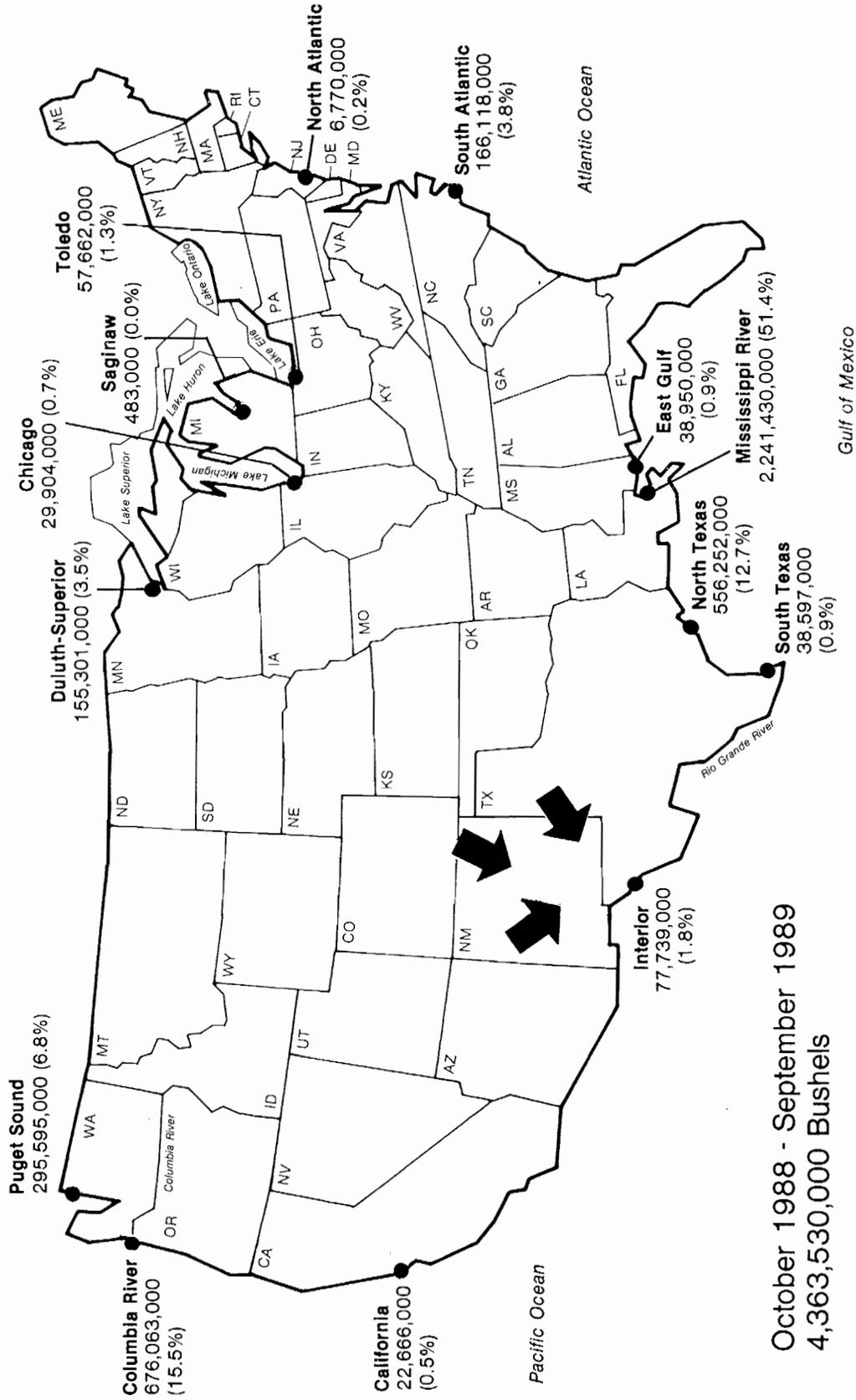
Number of Inspections
Performed Under the
U.S. Grain Standards Act



U.S. Agricultural Exports:
Wheat, Coarse Grains,
Soybeans, Rice, and
Sunflower Seed



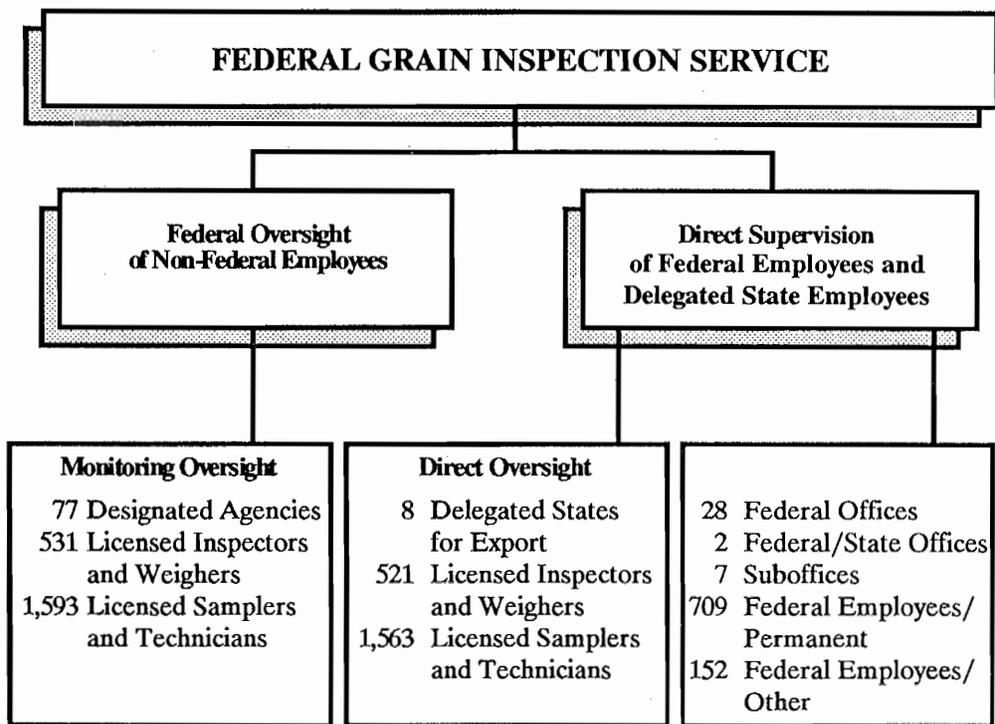
Inspections for Export on Port Area for Fiscal Year 1989



Organizational Structure

The National Inspection and Weighing System

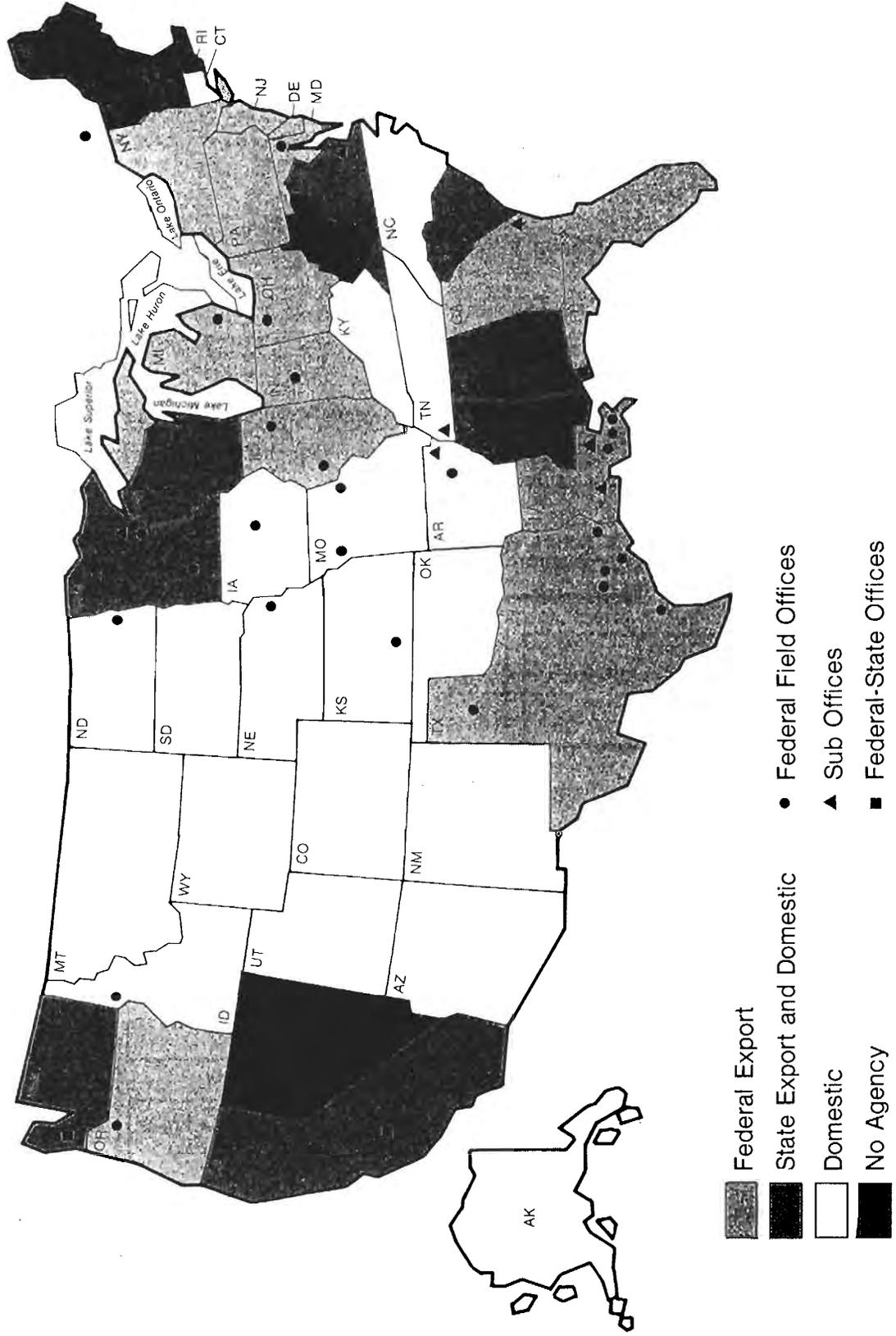
FGIS administers a nationwide system for officially inspecting and weighing grain through field offices; and State and private agencies which are delegated and/or designated by FGIS to provide official services.



The supervision provided by FGIS is integral to the national inspection system. The FGIS supervisory role is defined as the effective guidance of agencies, official personnel, and others who perform activities under the Act, to ensure the integrity and accuracy of those activities. Supervision includes: overseeing, directing, and coordinating the performance of activities under the Act; reviewing the performance of these activities; providing guidance and assistance to agencies as they carry out their responsibilities; and effecting appropriate action to ensure activities are performed in accordance with regulations and instructions.

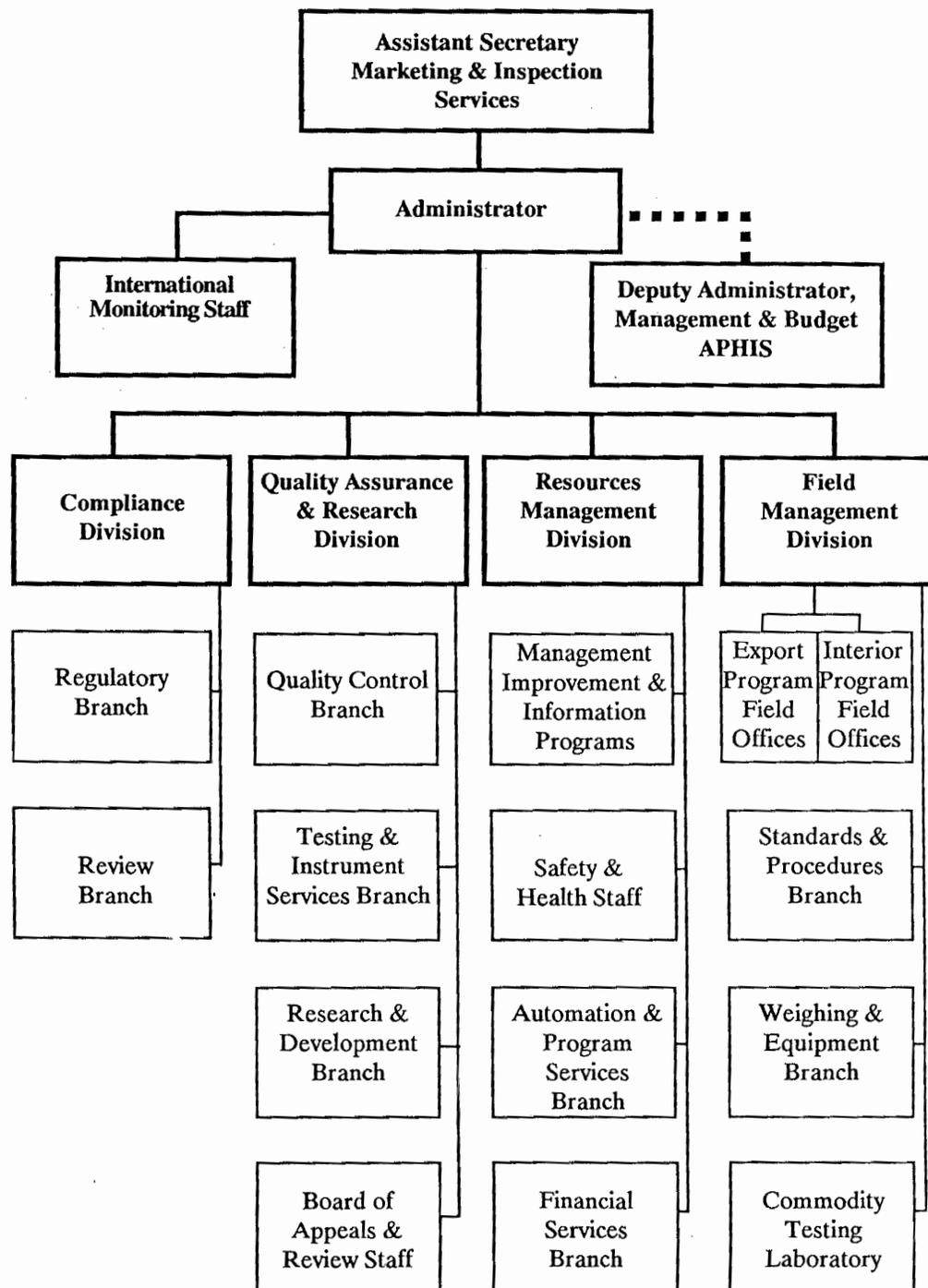
Federal Grain Inspection Service

Performance of Weighing and Inspection Services



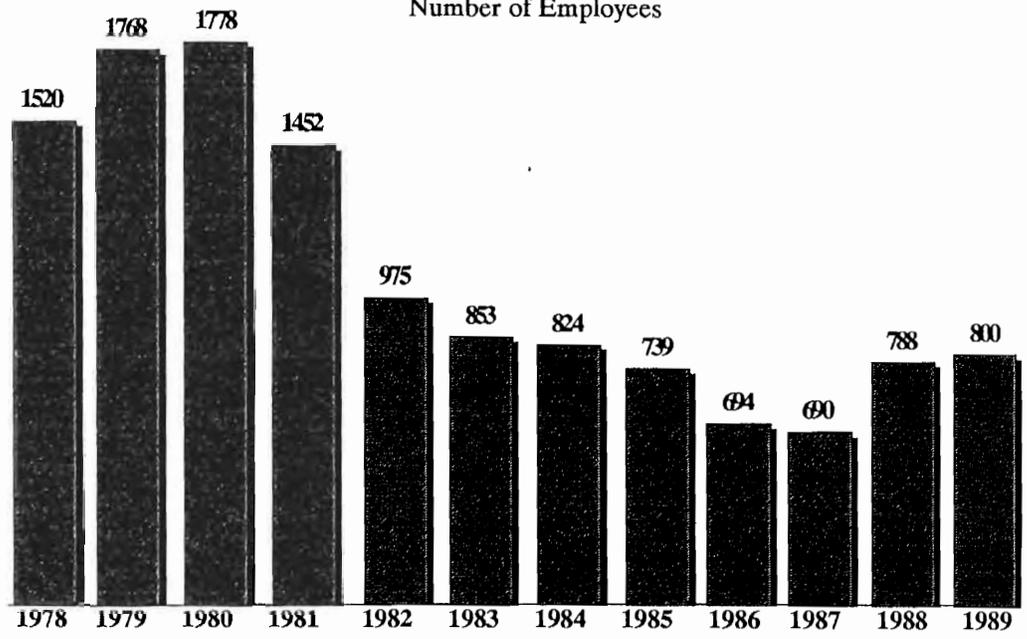
Headquarters

Three of the agency's four headquarters divisions -- Compliance, Field Management, and Resources Management -- are located in Washington, D.C. The fourth -- the Quality Assurance and Research Division -- is located in Kansas City, Missouri.



Full-Time Permanent
Employment History

Number of Employees



Compliance Division

Compliance is defined as the conformance with all requirements and procedures established by statute, regulation, instruction, or directive so that the managerial, administrative, and technical functions are accomplished effectively.

Compliance functions include: evaluating alleged violations and initiating preliminary investigations; initiating enforcement/administrative actions for violations of the U.S. Grain Standards Act (the Act), applicable provisions of the Agricultural Marketing Act of 1946 (AMA), and applicable regulations; conducting management and technical reviews, and initiating appropriate corrective actions; administering the program for delegating State agencies and designating official agencies; monitoring the performance of official functions; licensing official agency personnel; reviewing and, when appropriate, approving official agency fee schedules; identifying, monitoring, and, when appropriate, exempting official agency and licensee conflicts-of-interest; and responding to audits and surveys of FGIS programs.

The Compliance Division ensures, through reviews, evaluations, and, as necessary, enforcement actions, that the Act, applicable provisions of the AMA, and regulations, procedures, and policies issued thereunder are implemented accurately and uniformly.

Compliance Reviews

Compliance Division personnel conducted reviews of 11 field office circuits and 10 official agencies to evaluate management effectiveness and program compliance. Most field office circuits were found to be well managed and performing satisfactorily, although the reviews revealed minor procedural problems. Follow up reviews and onsite visits by headquarters personnel and field office managers ensure that non-compliances have been or are being corrected. As part of all reviews, the Compliance Division ensures that there is no discrimination in the delivery of FGIS services.

Management Evaluation

During fiscal year 1989, the Division conducted a Management Evaluation of the FGIS Board of Appeals and Review (BAR). The BAR is primarily responsible for performing appeal inspections and for monitoring the grading proficiency of official agencies and FGIS field offices. The evaluation was initiated in fiscal year 1987 to identify program-wide problems and the contributing factors, and to recommend actions to resolve problems before they adversely affect official services or the Agency's integrity.

The evaluation team found that despite a heavy workload and increased responsibilities, the BAR carries out its duties efficiently and effectively and meets the Agency's goal of promoting uniformity in the national grain inspection system. A lack of formal documentation or standard operating procedures (SOPs) for many of the procedures used was one of the few problems identified by reviewers. The BAR has developed SOPs which are in the process of being approved.

Alleged Violations

At the beginning of fiscal year 1989, 15 cases involving alleged violations of the Act and AMA were pending further action. During this fiscal year, 23 cases were opened, and 20 were closed, leaving 18 cases pending action. Alleged violations during fiscal year 1989 included deceptive practices; improper performance of official duties; improper sampling; improper procedures used in the interim designation of an official agency; harassment, improper influence, and assault of official personnel; exporting grain without official certificates; and improper mixing of two kinds of grain, which violates the Grain Quality Improvement Act of 1986.

During fiscal year 1989, the Compliance Division conducted six onsite investigations, referred nine cases to the Office of Inspector General (three were accepted and six were rejected), and addressed the remaining cases by evaluating information submitted by field office personnel. Of the 20 cases closed, 16 were closed after appropriate administrative actions were taken, and 4 were closed due to insufficient evidence to substantiate a violation.

Civil Penalties

During the fiscal year, FGIS assessed its first two civil penalties against two grain facilities for deceptive loading practices. The Office of General Counsel (OGC) negotiated settlements with both facilities. One firm was penalized for loading 20 railcars with better quality corn on top of lower quality corn. Consequently, a true average sample was not obtained and inaccurate certificates were issued. The firm paid a fine of \$9,000 and was denied official services for 3 days. A second firm paid \$11,000 in penalties without admitting or denying the deceptive loading of railcar shipments of soybeans. FGIS has initiated two more civil penalty actions involving deceptive loading practices.

Implementation of the Grain Quality Improvement Act of 1986

Compliance Division played a major role in effecting actions to implement the Grain Quality Improvement Act of 1986 (GQIA). Through a cooperative agreement between FGIS and the Agricultural Stabilization and Conservation Service (ASCS), ASCS agreed to (1) report suspected violations of the GQIA in facilities which are examined by ASCS personnel and (2) distribute, through county ASCS offices, educational information on the GQIA to producers and warehousemen licensed under the U.S. Warehouse Act. FGIS also worked with the National Grain and Feed Association to develop and disseminate a poster explaining GQIA provisions.

Agency Designations

Under triennial renewal procedures, 27 agency designations automatically terminated in fiscal year 1989. All were renewed after a complete performance review. Two agencies--Peoria Grain Inspection Service, Inc., Peoria, Illinois; and Agricultural Seed Laboratories, Inc., Phoenix, Arizona--voluntarily canceled their designations. The geographic area serviced by the Peoria agency will be reassigned. FGIS did not designate a new agency in Phoenix because no comments were received in response to the Agency's request for a replacement agency in the area. Requests for service from this territory are now handled by neighboring agencies.

Conflicts of Interest

At the beginning of fiscal year 1989, six of the seven designated agencies granted discretionary conflict-of-interest waivers were operating without significant problems. The seventh agency--Peoria Grain Inspection Service, Inc., Peoria, Illinois--experienced organizational and management problems in fiscal year 1988 which affected its conflict-of-interest status. The agency requested that its designation be allowed to terminate. As of September 30, 1989, six agencies continue to operate under waivers of conflict-of-interest provisions.

The Compliance Division evaluated 13 conflict-of-interest situations involving official agencies or licensees. Exceptions, granted on the basis of an agency's or individual's agreement to comply with specific conditions, were granted for one official agency and eight licensees, and were updated for four other licensees.

**Overview of
Compliance Activities
Fiscal Year 1989**

ITEM	FISCAL YEARS		
	1987	1988	1989
Agency Delegations and Designations	80	79	77
Designations Renewed	22	29	27
State Delegations at Export Port Locations	8	8	8
Registration Certificates Issued to Grain Firms	98	92	96
Licensees:			
Inspectors			718
Weighers			95
AMA Inspectors			86
Samplers/Technicians (approximate)			1,528

Field Management Division

The Field Management Division (FM) directs the operation of FGIS field offices; develops inspection and weighing policies and procedures; establishes the U.S. standards for grain, rice, and other commodities; facilitates improvements in the quality and marketing of grain and processed commodities; oversees delegated and designated agencies; and monitors the quality of grain as it moves through the market.

Broken Corn and Foreign Material

FGIS is currently conducting a study to determine whether the percentage of broken corn (BC) should be determined separately from the percentage of foreign material (FM) in corn. Special equipment was developed that measures the factors separately. A field trial of the equipment and related procedures is presently being conducted. Market data is also being collected to determine the actual levels of BC and FM in the marketplace. Furthermore, FGIS is cosponsoring research to determine if separate factors of BC and FM would be more beneficial to the marketing of U.S. corn. The study is expected to be completed by December 1990.

Broken Kernels and Foreign Material (Sorghum)

A June 1986 consensus report prepared by the Grain Quality Workshop, an industry technical working group, proposed reporting broken kernels and foreign material as two separate grade determining factors contingent upon an indepth statistical analysis by FGIS. These changes were proposed to fulfill the objectives of the Grain Quality Improvement Act of 1986. In response to this proposal, FGIS (1) gathered and evaluated pertinent inspection information, (2) conducted an economic impact analysis through a contract with the Economic Research Service, and (3) shared the results of the evaluation and economic impact analysis with the Grain Quality Workshop. FGIS is continuing its work with industry to develop standards which describe quality and offer information to establish incentives to improve quality.

Canola

In 1989, U.S. producers planted an estimated 75,000 acres of canola. Estimates of the 1990 crop range from 100,000 to 200,000 acres, and projections for 1995 estimate plantings at 5 million acres. In response to this growing interest, FGIS published a notice requesting public comments on the need for rapeseed standards. ("Canola" refers to certain varieties of rapeseed which provide edible oil and meal.) Comments received and other information gathered by FGIS indicate a substantial interest in developing these standards.

Commodity Testing Laboratory -- Automation

To improve the quality of service and accuracy of data, FGIS automated the Commodity Testing Laboratory at Beltsville, Maryland. The lab was also reorganized, renovated, and upgraded to meet future demands for processed product testing services.

Cu-Sum

Cu-Sum is the statistical inspection plan FGIS uses to measure uniformity of quality in shiplot grain. This year, FGIS proposed revising the Cu-Sum plan by: (1) revising tolerances based on new statistical data, (2) updating review inspection procedures by limiting the number of possible review inspections and averaging review inspection results with original inspection results, (3) redefining unacceptable quality, (4) including wheat protein determinations as part of the inspection plan, and (5) offering optional component sample inspections. Sixty-nine comments were received from producers, exporters, and foreign buyers regarding the proposed changes. FGIS expects to publish the final changes during fiscal year 1990.

Dockage and Foreign Material -- Wheat

FGIS conducted a study on the effects of combining dockage with foreign material as a grading factor for wheat. The study indicated that (1) wheat generally contains less foreign material than dockage; (2) a majority of U.S. wheat contains foreign material within the U.S. No. 1 grade limit; and (3) shifts in numerical grade designations occur when dockage and foreign material are combined either as a grading or nongrading factor. The wheat industry supports efforts to market cleaner wheat. However, no consensus exists on how to achieve this goal, or whether the cost of providing cleaner wheat would be offset by increased U.S. wheat competitiveness and prevention of market erosion.

The Economic Research Service determined that the cost of combining dockage with foreign material as a grading factor in wheat would range between \$18.7 and \$19.9 million a year. These costs would result from grain grading a lower grade and receiving a lower market value.

FGIS concluded that current standards provide sufficient information regarding impurities in wheat and that modifying the Official U.S. Standards for Grain alone will not improve grain quality. Existing evidence does not indicate that combining dockage and FM as a grading factor will serve as an incentive to reduce the amount of those factors in wheat.

Dust Removal

During 1988, FGIS initiated a study to determine the economic effects of requiring the permanent removal of dust through dust control systems at export elevators. Upon completion at the end of fiscal year 1990, the study will assess (1) the economic impact of retrofitting dust control systems at export grain elevators, (2) the potential benefits derived from the improved grain quality, and (3) the cost of disposing of the removed dust.

Regulation Review

In accordance with Executive Order 12291 and Departmental Regulation 1512-1, FGIS is reviewing the regulations under the United States Grain Standards Act, as amended. FGIS proposes to rewrite, revise, and reorganize certain sections of these regulations to consolidate applicable provisions, arrange requirements in a more logical sequence, simplify language, and clarify the intent. The proposed modifications will promote a better understanding of policies and procedures governing the national inspection and weighing system.

Soybean Oil and Protein Testing

FGIS equipped all major export offices with near-infrared spectroscopy instruments to perform oil and protein testing services for soybeans as official criteria effective September 4, 1989. FGIS reports results to the nearest tenth of a percent on a 13-percent moisture basis. Availability of this information to all parties is predicted to have a number of favorable consequences. Plant breeders and producers will have increased incentive to improve the overall intrinsic quality of soybeans; and the accessibility of the testing service may facilitate the integration of intrinsic quality factors into the market pricing structure.

Weighing Systems

FGIS reviewed monitoring requirements on official weighing systems to improve the efficiency and effectiveness of the national weighing system. As a result, parameters for an automated monitoring system for the official supervision of grain weighing, which would not require 100 percent direct supervision, have been developed. This monitoring system would constantly update the weight of grain in the scale; provide a permanent recording of the weighing process; and ensure grain flow integrity. The system could be programmed to print a record of all routing paths, scale and bin selections, system component identification, time and date, and other pertinent information.

Inspection Program Data

Item	Fiscal Years		
	1987	1988	1989
Quantity of Grain Produced* (MMt) <u>1/</u>	329.5	239.8	332.3
Quantity of Grain Officially Inspected (MMt)			
Domestic	198.7	195.3	183.6
Export by FGIS	77.6	91.3	87.1
by Delegated States	<u>20.5</u>	<u>24.3</u>	<u>27.0</u>
Total	296.8	310.9	297.7
Number of Delegated States/Official Agencies	80	79	77
Number of Official Original Inspections and Reinspections			
FGIS	217,072	222,516	198,967
Delegated States/Official Agencies	<u>3,119,253</u>	<u>2,977,863</u>	<u>2,620,408</u>
Total	3,336,325	3,200,379	2,819,375
Number of Official Inspection Supervisions	43,590	48,485	43,000*
Number of Official Protein Supervisions.	34,000	37,634	41,486
Number of Appeals	16,976	12,077	18,000*
Number of Grain Appeals Carried to BAR <u>2/</u>	3,333	2,176	1,226
Number of BAR Grain Inspection Supervisions	9,980	10,351	14,152
Number of Protein Inspections			
FGIS	54,810	70,435	45,903
Delegated States/Official Agencies	<u>604,715</u>	<u>620,552</u>	<u>482,715</u>
Total	659,525	690,987	528,618
Number of Aflatoxin Inspections	13,789	16,934	49,171
Quantity of Rice Inspected (MMt) (milled basis)	4.1	4.1	4.3

* Estimate.

1. Million metric tons.

2. Board of Appeals and Review.

Weighing Program Data

Item	Fiscal Years		
	1987	1988	1989
Official Weight Certificates Issued			
FGIS			
Class X*	120,714	119,853	95,377
Class Y**	14,678	17,148	13,498
Total	<u>135,392</u>	<u>137,001</u>	<u>108,875</u>
Delegated States/Official Agencies			
Class X*	131,328	78,012	50,491
Class Y**	<u>110,705</u>	<u>174,456</u>	<u>179,127</u>
Total	242,033	252,468	229,618
Exported Grain Weighed (MMt)			
FGIS	75.5	89.1	85.1
Delegated States	<u>20.5</u>	<u>24.3</u>	<u>27.0</u>
Total	96.0	113.4	112.1
Number of Certified Scales in Service			
Export Elevators	455	475	408
Number of Railroad Track Scales Tested	123	120	110
Number of Foreign Weight Complaints	1	1	1

* Class X involves 100 percent supervision.

** Class Y involves a minimum of 25 percent supervision.

Quality Assurance and Research Division

The Quality Assurance and Research Division (QARD) is responsible for developing objective tests and methods for determining grain quality; developing and maintaining reference standards for FGIS methods; determining criteria and recommending specifications for grain inspection instrumentation; carrying out type equipment testing and approval; developing and maintaining a grading and inspection quality control program and an equipment checktesting program for the national grain inspection system; developing and maintaining an Agency-wide quality assurance program; maintaining uniform application of standards for grains and commodities; rendering final decisions on inspection appeals; and conducting technical training for field personnel. QARD is responsible for researching, developing, and implementing a variety of Agency grading and inspection programs.

Aflatoxin Testing Methodology

QARD conducted an extensive comparative study to evaluate the feasibility of replacing the Holaday-Velasco minicolumn test, currently the primary screening tool for determining aflatoxin contamination in corn, with commercially available aflatoxin test kits. Six kits--Afla-20-cup, Aflatest, Agri-screen, EZ-Screen, OXOID, and SAM-A--were approved for use in screening corn for aflatoxin at the 20-parts-per-billion level in the official grain inspection system.

Furthermore, the Division is utilizing data from the study to design criteria and performance specifications for evaluating other aflatoxin screening kits in the future.

Calibrations

QARD is responsible for calibrating and testing all grain inspection equipment used in the national grain inspection system. The Division developed a new Hard Red Winter wheat calibration for near-infrared reflectance instruments which became effective in June 1989.

In addition, the Division revised the sunflower seed oil calibration for nuclear magnetic resonance instruments to increase the accuracy and uniformity of results. The calibration was implemented in February 1989.

Calibrations for the Motomco 919 moisture meter were evaluated and updated for 28 types of grains and commodities and were checked for accuracy twice during the year.

Germ Damage in Sorghum

Germ damage in sorghum is a continuing concern of the grain industry. In response to noted difficulty in assessing damage by the manual bleach method, QARD developed an automated bleach test. Long-term testing of the automated procedure is in progress.

Grain Odor

Efforts are underway by the Agricultural Research Service (ARS) and FGIS to develop a simple mechanical "sniffer" to detect types and quantities of odors in grain. To date, ARS has identified some 50 possible odor-causing compounds in sorghum. Related research includes analyzing samples chemically for odors and microbiologically for organisms. This research involves establishing an FGIS odor panel and developing odor descriptors.

Insect Infestation	FGIS is supporting several research projects on insect issues, including the development of methods to detect hidden insect infestation in grains. An enzyme-linked immunosorbent assay capable of detecting small quantities of insect muscle protein appears promising.
Moisture Content	The Division compared the USDA air oven moisture methods for corn, wheat, soybeans, and sorghum with the International Association of Cereal Chemists air oven and the Karl Fischer chemical analysis methods. Air oven method results are the basis for calibrating the electronic moisture meters. The analytical results of the FGIS comparison are presently being evaluated by grain industry experts outside FGIS.
Pesticide Residues	Pesticide residues are an increasingly important concern. In an effort to provide needed information about pesticide residues, QARD has purchased a new Gas Chromatograph/Liquid Chromatograph/Mass Spectrophotometer. This instrument will be used to survey U.S. grain and establish a baseline for the presence of pesticide residues and to determine the accuracy of commercially available quick screening test kits.
Soybean Protein and Oil Testing	<p>In response to a growing need for intrinsic quality information, FGIS began offering soybean protein and oil content testing as an official service of the national grain inspection system on September 4, 1989. QARD developed procedures for measuring soybean protein and oil levels using near-infrared (NIR) instruments. Four instruments were approved for official use. One of the new NIR instruments analyzes the whole soybean, thus eliminating a time-consuming grinding process. Twenty-one of the whole-soybean NIR instruments located at export points and at the FGIS Technical Center enable the Agency to provide more efficient and timely service.</p> <p>Using the original NIR calibrations from the soybean program as a model, QARD is developing calibrations and procedures for using NIR instruments to measure protein, oil, and starch in corn.</p>
Sprout Damage	Falling Number tests indirectly measure the amount of sprout damage in wheat. QARD continuously monitors Falling Number testing units to ensure the accuracy and reliability of the state-of-the-art equipment. An improved method was developed by FGIS which increased the accuracy of the Falling Number test by reducing the effect of barometric pressure on test results.
Weed Seeds	In conjunction with ARS, FGIS has undertaken a comprehensive study of the toxicity of several weed seeds. Data will be used to reassess the allowable number of each toxic weed seed in grains.
Wheat Classification	A major effort is underway to develop an objective wheat classification method. Between 1987 and 1989, QARD has collected over 25,000 wheat samples representing five classes of wheat from across the Nation. QARD is using these samples to test three prototype single-kernel hardness testers which were developed independently by the ARS Instrument Research Laboratory, ARS Grain Marketing Research Laboratory, and Kansas State University. In addition, analyses of such factors as protein, moisture, near-infrared hardness, single-kernel hardness, and other quality factors are also being conducted.

Board of Appeals and Review

The Board of Appeals and Review (BAR), a branch of QARD, provides final appeal grades by rendering opinions on subjective and special grading factors, under the U.S. Grain Standards Act and Agricultural Marketing Act of 1946. In addition, the BAR maintains uniformity on interpretive grading factors throughout the national inspection system by developing, approving, distributing, and maintaining reference standards for all grains and graded commodities.

The BAR directs FGIS quality control programs for grain and commodity subjective testing. The BAR provides technical training, and prepares and grades samples and written material for proficiency evaluations. In addition, the BAR provides information for the Grain Inspection Monitoring System, an automated program which reports the quality of the national inspection system's subjective and special grading results.

**Board of Appeals and Review Activities
Fiscal Year 1989**

Appeal Inspections Performed	1,226
Grain	1,091
Commodity	10
Protein	98
Rice	27
Grain Inspection Supervision Samples Graded	14,152
Grain	11,248
Rice	2,620
Pulses	284
Opinion Samples Submitted and Reviewed	994
Foreign Complaint Samples Reviewed	571
Wheat Hardness/Special Request Samples Reviewed	12,722
Training Seminars Conducted	31
Grain Grading	28
Commodity Grading	3
Number of Official Inspection Personnel Trained	383

Resources Management Division

The Resources Management Division (RMD) coordinates and plans FGIS administrative management programs. The Division administers programs which provide training, management improvement, automation, budget, financial, directives, regulations management, public affairs, and health and safety services. RMD also evaluates the need for, coordinates acquisition of, and obtains resources needed to provide administrative support services for FGIS.

Planning, Training, and Development

As in previous years, RMD continued to improve the FGIS planning, development, and training processes. The Division augmented the Agency's organizational development efforts by formulating a management plan which clearly communicated FGIS goals and objectives to all employees and interested groups. At the annual management retreat, the Division arranged intensive training for FGIS managers in leadership techniques, organizational creativity, strategic planning for the future, and total quality management. Furthermore, the Division initiated a management development plan designed to train future managers and update current supervisors. The program focuses on addressing the organizational attributes that will shape the future of FGIS into the 21st century.

Automation

The Division, using a structured life cycle approach to automating FGIS programs, made noteworthy progress on several major planned information resources management (IRM) initiatives. The automation of the FGIS Commodity Testing Laboratory at Beltsville, Maryland, was implemented. Colorado State University, under contract with FGIS, delivered systems analysis and design products for automating the Quality Assurance and Research Division's programs. Systems acquisition, development, and implementation will continue in fiscal year 1990.

During fiscal year 1989, RMD chaired two task forces consisting of representatives from all FGIS divisions and the American Association of Grain Inspection and Weighing Agencies. One task force evaluated the possibility of redesigning FGIS' Grain Inspection Monitoring System (GIMS). The GIMS task force recommended changes to both the underlying program and the automated support system. The second task force worked to determine the operational and economic feasibility of developing a standardized domestic grain information system similar to the ongoing export grain information system. As envisioned, the system would capture and process local data about all domestic inspections and electronically transmit that information to a central national database.

Financial Services

The Division increased utilization of automation to develop and track budgets. Automation has also resulted in faster interaction between the Agency and its centralized accounting database system at the National Finance Center, New Orleans, Louisiana.

Regulations, Directives, and Public Affairs

The Division's regulations management, directives, and public affairs functions helped to improve both internal and external Agency communications. The Division maintains and disseminates Agency regulations and program directives. In addition, a continuous flow of press releases, reports, and informational brochures to media, the grain industry, and the public has increased communication with external audiences.

Safety and Health

The FGIS safety and health program continued to expand and improve during fiscal year 1989. Program highlights include:

- o training all FGIS employees in the Federal Hazard Communication Program;
- o publishing a monthly "Safety and Occupational Health Update" for all FGIS employees;
- o developing and implementing a nationwide Employee Counseling and Assistance Program for all FGIS personnel;
- o enhancing work environments through ergonomic improvements, and minimizing employee exposure to noise, dust, and other pollutants;
- o increasing employee participation in the Agency's safety, health, security, and fire prevention programs; and
- o providing cash awards to supervisory and clerical staff for their contributions to the FGIS safety and health program.

Grain Dust Explosions

During fiscal year 1989, 10 grain dust explosions occurred which resulted in 5 injuries and 2 fatalities. This record is an improvement compared to fiscal year 1988, when 12 explosions caused 13 injuries and 8 deaths.

Summary of Reported Grain Dust Explosions

Facility/Location	Date	Injuries	Deaths
Louis Dreyfus Reserve, LA	10/05/88	0	0
Corpus Christi Public Corpus Christi, TX	11/06/88	0	0
Con Agra-Fruen Mill Minneapolis, MN	12/02/88	0	0
Midwest Grain Atchinson, KS	02/03/89	0	0
Quaker Oats Cedar Rapids, IA	02/14/89	0	0
Zen Noh Grain Convent, LA	03/30/89	0	0
A.E. Staley Mfg. Decatur, IL	05/12/89	0	0
Montezuma Coop Montezuma, KS	07/27/89	2	0
Ferruzzi, U.S.A. Myrtle Grove, LA	08/16/89	0	0
Cargill Elevator Bingham Lake, MN	09/22/89	3	2
TOTAL		5	2

The information regarding grain dust explosions was reported to FGIS through the cooperation of universities, insurers, trade groups, FGIS personnel, and a news clipping service. FGIS does not investigate grain dust explosions, and the public sector is not required to report explosions to FGIS. No deaths or injuries occurred to FGIS employees in any of the above-listed incidents.

**USDA Grain Storage,
Handling, and Processing
Safety Coordinating
Subcommittee**

The FGIS Administrator serves as chairman of the USDA Grain Storage, Handling, and Processing Safety Coordinating Subcommittee, which was established in 1982 to address the increasing incidence of grain dust explosions occurring across the Nation.

The Subcommittee coordinates USDA grain storage, handling, and processing safety efforts; and serves as liaison to other Federal, State, and local governments; industry, unions, and civic groups; academia; foreign government researchers; and other entities.

Since the establishment of the Subcommittee, the average number of annual explosions, fatalities, and injuries has declined considerably.

	1976-82 (before Subcommittee)	1983-89 (since Subcommittee)
Average Number of Explosions	27.5	16.3
Average Number of Fatalities	12.0	4.3
Average Number of Injuries	54.3	15.8

International Monitoring Program

The International Monitoring program functions include (1) traveling to foreign nations to explain FGIS' inspection and weighing procedures; (2) monitoring grain shipments at destination ports to compare origin and destination quality; (3) briefing visiting foreign agricultural officials and others on FGIS procedures for obtaining information on the quality of U.S. grain shipments; and (4) preparing written or onsite responses to complaints about grain shipments received through the Foreign Agricultural Service (FAS) and other sources.

Complaints

FGIS received 24 quality complaints and 1 quantity (weight) complaint in fiscal year 1989, compared with 34 quality complaints and 1 quantity complaint in 1988. In 1989, the tonnage involved in foreign complaints was approximately 1.0 million metric tons, which represents 0.9 percent, by weight, of the total amount of grain exported during the year. The complaints involved 50 shiplots loaded aboard 40 vessels. By comparison, the 35 complaints received in 1988 represented approximately 1.0 percent of total grain exports.

Foreign Grain Complaints Three-Year Summary

	Fiscal Year 1987	Fiscal Year 1988	Fiscal Year 1989
Quality Complaints	59	34	24
Quantity Complaints	1	1	1
Total	59*	35	25
Export Volume Inspected (million metric tons)	94.9	113.3	112.0
Complaint Tonnage (million metric tons)	3.5	1.1	1.0
Complaint Percentage	3.7	1.0	0.9

*The quantity complaint also included quality.

The most common basis of complaints in fiscal year 1989 was heat damage in wheat. Six complaints were received on this factor. As a result, FGIS initiated an evaluation to determine whether the Agency should revise its interpretation of heat damage. Three complaints each were received about infestation in wheat, damaged kernels in wheat, and broken corn and foreign material in corn. Two complaints were filed alleging the presence of aflatoxin in corn. FGIS reanalyzed the file subplot samples and confirmed the original inspection's negative results. In both cases, the receivers withdrew the complaints. No wheat protein complaints were received during 1989, compared with 6 in 1988 and 15 in 1987.

Summaries of foreign complaints, briefings presented to foreign trade and governmental teams, and FGIS activities involving foreign travel during fiscal year 1989 appear on the following pages.

**Summary of Inspection
and Weighing
Foreign Complaints
Fiscal Year 1989**

Country	Grain	Number of Complaints	Nature of Complaint
Africa			
Congo	Wheat	1	Damaged kernels, heat damage, infestation
Egypt	Corn	1	✓ Weed seeds
	Wheat	1	Infestation, weed seeds
Asia			
India	Corn	1	✓ Broken corn and foreign material
	Corn	1	✓ Aflatoxin
Japan	Wheat	4	Heat damage
	Wheat	1	Damaged kernels
Korea	Wheat	1	Infestation
People's Republic of China	Wheat	1	TCK smut
Europe			
Canary Islands	Corn	1	✓ Broken corn and foreign material
Israel	Corn	1	✓ Infestation
Turkey	Corn	1	✓ Broken corn and foreign material
USSR	Corn	1	Weight

Country	Grain	Number of Complaints	Nature of Complaint
Latin America			
Colombia	Soybeans	1	✓ Infestation
	Corn	1	✓ Infestation
Costa Rica	Wheat	1	✓ Dockage
Guatemala	Corn	1	✓ Aflatoxin, all quality factors
Mexico	Soybeans	1	✓ Damaged kernels, soybeans of other color
	Sorghum	1	✓ Zearalenone
Venezuela	Wheat	1	✓ Damaged kernels, heat damage, dockage
	Soybeans	1	✓ Foreign material
Middle East			
Saudi Arabia	Corn	1	✓ Previous cargo contamination
Total		25	

**Summary of Briefings
with Foreign Trade and
Governmental Teams**

		Number of Teams
Africa	1. Algeria	1
	2. Kenya	1
	3. Morocco	1
	4. Senegal	1
Asia	1. India	1
	2. Indonesia	1
	3. Japan	6
	4. People's Republic of China	1
	5. South Korea	3
	6. Sri Lanka	1
	7. Taiwan	2
Europe	1. Netherlands	1
	2. Poland	1
	3. Portugal	1
	4. Sweden	1
	5. Turkey	1
	6. United Kingdom	1
	7. USSR	4
	8. Yugoslavia	1
Latin America	1. Mexico	2
	2. Peru	1
	3. Venezuela	1
Pacifica	1. Australia	1
Total		35

**Summary of Activities Involving Foreign Travel
Fiscal Year 1989**

Purpose	Number	Country Visited	Dates
1. To meet with importers to discuss wheat quality issues and explain recent changes to FGIS inspection procedures at the request of U.S. Wheat Associates.	1	New Zealand, India, Singapore, Thailand, Malaysia, Bangladesh	10/27-11/19/88
2. To meet with Canadian Grains Institute officials to discuss flaxseed standards.	1	Canada	11/21-11/22/88
3. To participate in a conference with CONASUPO to discuss the effects of the mycotoxin zearalenone on farm animals at the request of the Agricultural Counselor.	1	Mexico	1/12-1/13/89
4. To recommend suitable sites to install diverter-type sampling equipment at the request of U.S. Wheat Associates.	1	Indonesia, Malaysia, Thailand	1/14-1/22/89
5. To investigate a complaint regarding the presence of weed seeds and ergot in wheat shipments at the request of the U.S. Agency for International Development.	1	Ethiopia	1/18-2/2/89
6. To address a complaint regarding the presence of TCK smut at the request of the exporter.	1	People's Republic of China	1/28-2/5/89
7. To participate in the Grain Elevator and Processing Society's annual technical conference and exposition.	3	Canada	2/26-3/1/89
8. To attend a bilateral U.S./Canada conference on the impact of the Free Trade Agreement on grain marketing.	1	Canada	4/24-4/27/89
9. To perform temporary duty assignment to alleviate workload demands.	1	Canada	4/24-5/5/89

Purpose	Number	Country Visited	Dates
10. To participate in the USDA/ CONASUPO Plenary meeting.	3	Mexico	5/17- 5/19/89
11. To participate in roundtable grain quality discussions at the request of U.S. Feed Grains Council.	1	Turkey, Egypt, Saudi Arabia	6/2- 6/12/89
12. To give a presentation at the 24th International Grain Industry Course at the Canadian Inter- national Grains Institute.	1	Canada	6/20- 6/22/89
13. To present a paper at the 1989 International Summer Meeting of the American Society of Agricultural Engineers.	1	Canada	6/25- 6/28/89
14. To attend a technical computer language seminar.	1	Canada	6/25- 6/28/89
15. To monitor the quality of a wheat cargo from origin to destination ports at the request of U.S. Wheat Associates.	1	Venezuela	7/2- 7/13/89
16. To participate in the CODEX Alimentarius Commission meeting.	1	Switzerland	7/2- 7/12/89
17. To address a foreign complaint on several wheat and corn ship- ments alleged to contain prohibited weed seeds and dead insects.	1	Egypt	7/27- 8/12/89
18. To conduct wheat inspection workshops at the request of U.S. Wheat Associates.	2	Equador	8/13- 8/18/89
19. To participate in a wheat grading seminar at the request of U.S. Wheat Associates.	2	USSR	9/5- 9/12/89

Purpose	Number	Country Visited	Dates
20. To participate in a wheat grading seminar and grain procurement conferences, to meet with soybean processors, and to visit Rotterdam port facilities.	1	USSR, Yemen, Egypt, West Germany, The Netherlands	9/7-9/24/89
21. To participate in a wheat marketing seminar at the request of U.S. Wheat Associates.	1	Morocco	9/8-9/15/89
22. To set up a grain inspection laboratory and train wheat inspection personnel at the request of U.S. Wheat Associates.	1	Yemen	9/9-9/21/89
23. To give a presentation at the 6th International Flour Technology Program, Canadian International Grains Institute.	1	Canada	9/11-9/13/89

Budget Appendix

Status of
 Fee-Supported Accounts
 Fiscal Year 1989
 (Dollars in Thousands)

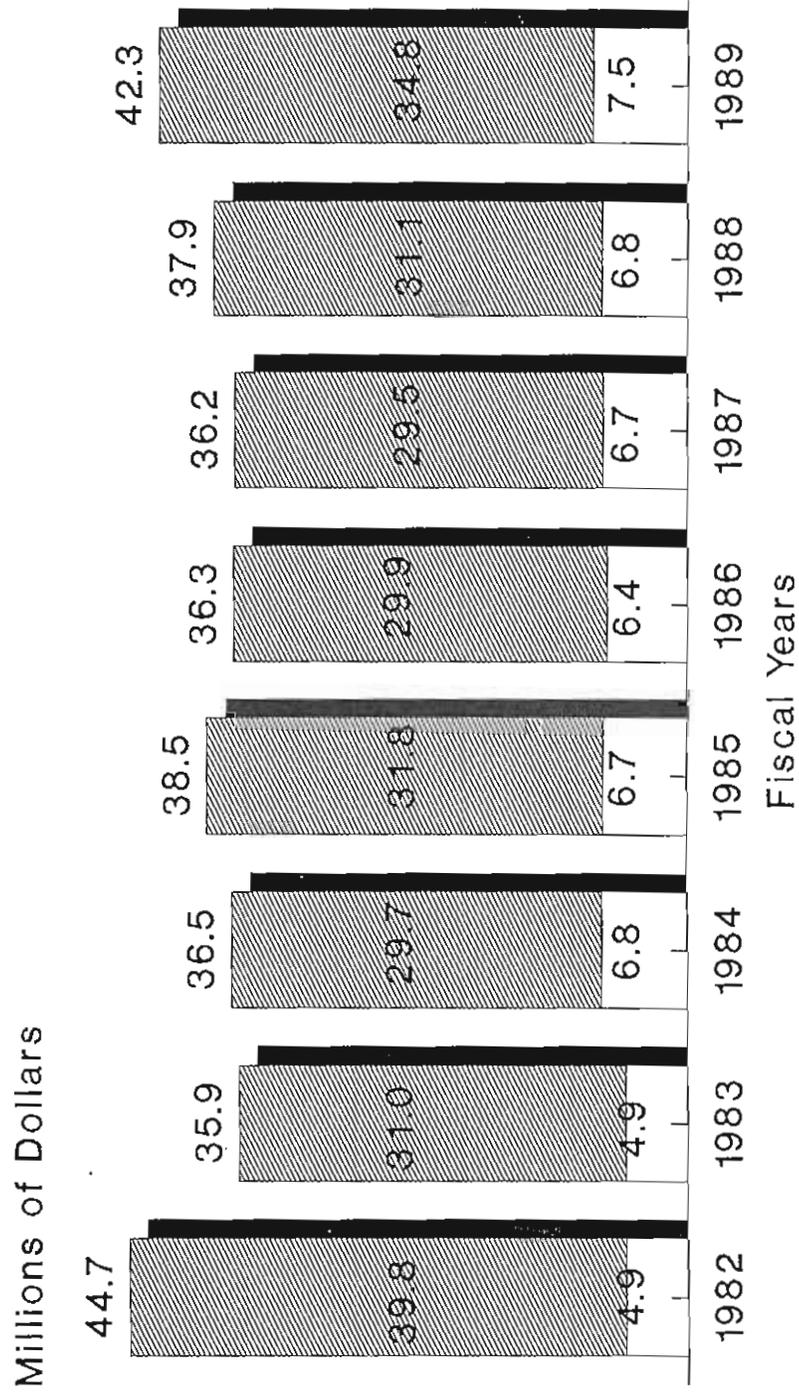
Program	Revenue 9/30/89	Obligations 9/30/89	Profit/ (Loss) 9/30/89	Unobligated Funds 9/30/89
U.S. Grain Standards Act				
Inspection and Weighing	\$22,489	\$22,566	\$(77)	\$5,270
Canadian Operations	507	368	139	(525)
Official Agencies	2,038	2,051	(13)	4,273
Registration	16	6	10	25
USGSA Subtotal	25,050	24,991	59	9,043
Agricultural Marketing Act of 1946				
Rice Inspection	3,594	3,665	(71)	741
Commodity Inspection	5,828	6,139	(311)	4,509
AMA Subtotal	9,422	9,804	(382)	5,250
FGIS Total FY 89	34,472	34,795	(323)	14,293

November 1, 1989

Ten Year Financial History of FGIS
 Appropriated Fund
 (Dollars in Thousands)

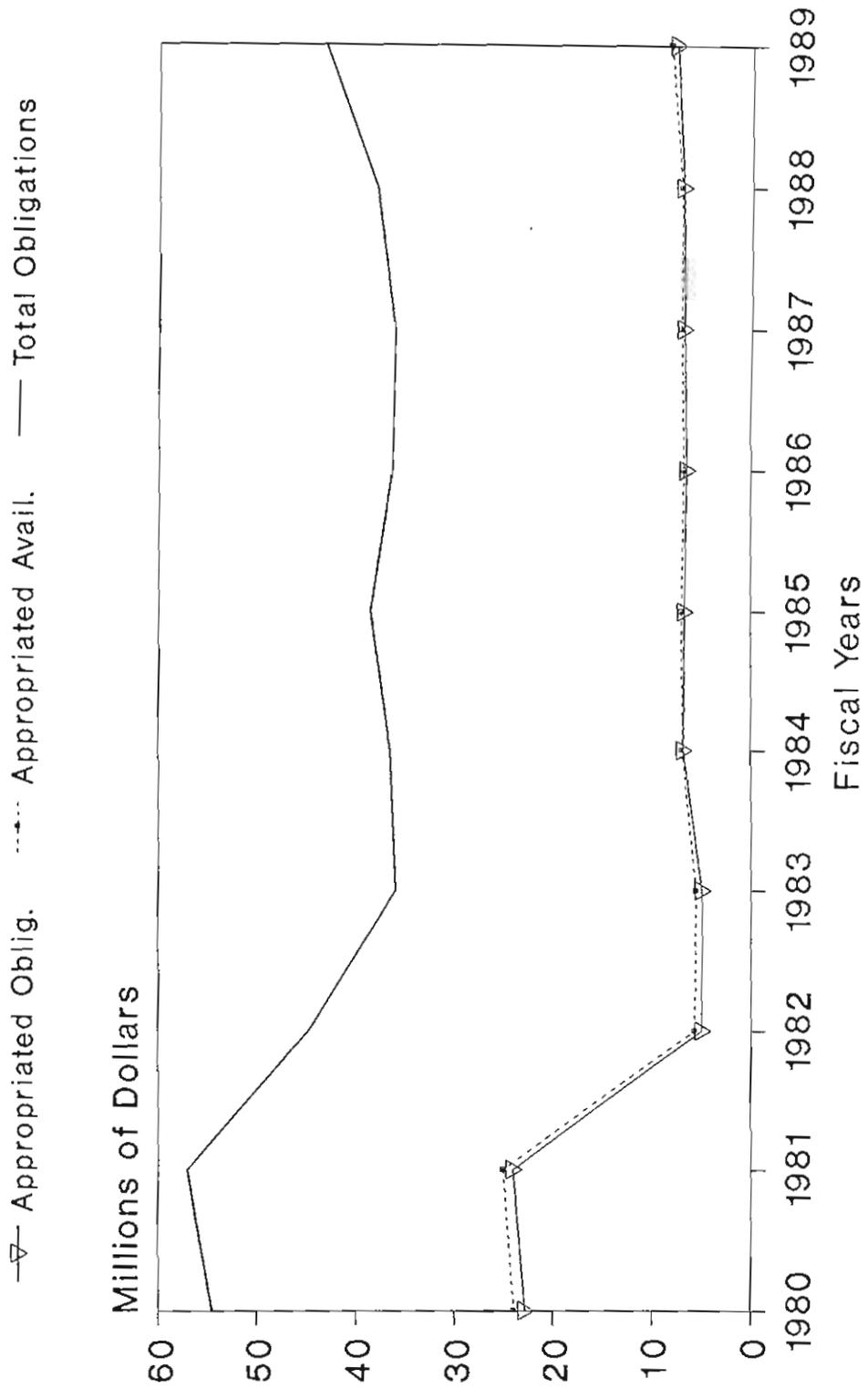
DESCRIPTION	F Y 1989	F Y 1988	F Y 1987	F Y 1986	F Y 1985	F Y 1984	F Y 1983	F Y 1982	F Y 1981	F Y 1980
Budget Authority	\$8,115	\$7,020	\$6,826	\$6,702	\$6,994	\$6,861	\$5,548	\$5,600	\$25,062	\$23,971
Personnel Compensation	3,911	4,046	3,877	3,768	3,731	3,684	2,439	2,798	14,852	13,336
Personnel Benefits	658	678	552	494	493	532	296	231	1,550	1,382
Benefits to Former Employees	12	28	62	22	72	99	643	617	7	0
Travel & Transportation of Personnel	280	251	315	244	254	276	171	199	1,049	1,135
Transportation of Things	26	39	34	32	23	23	14	13	107	130
Standard Level User Charges	0	0	0	0	0	0	0	271	891	861
Rental Payments to Others	42	18	22	19	29	0	0	0	0	0
Communication, Utilities, etc.	258	215	204	270	225	236	173	154	938	583
Printing & Reproduction	28	29	32	34	37	47	13	34	101	194
Other Services	1,626	1,074	1,182	1,115	1,386	1,557	831	542	4,198	4,221
Supplies & Materials	170	177	142	147	129	105	68	41	256	298
Equipment	483	251	271	265	306	202	270	48	84	686
Insurance Claims & Indemnity	1	0	0	0	0	0	0	0	2	3
TOTAL OBLIGATIONS	7,495	6,086	6,693	6,401	6,685	6,761	4,918	4,948	24,035	22,829
Unobligated Balance Lapsing	\$620	\$214	\$133	\$301	\$309	\$100	\$630	\$652	\$1,027	\$1,142
Total Number of Permanent Positions	131	131	116	118	97	135	75	76	659	821

FGIS Appropriated and Fee-Supported Expenditures



1989 - Appropriated Allocation 8,115,000

FGIS Appropriated Funds Availability and Obligations



FGIS Revolving Funds Revenues and Obligations

• Rev. Fund Revenues ····+ Rev. Fund Obliga. — Total Agency Oblig.

