



United States
Department of
Agriculture

Federal Grain
Inspection
Service

Annual Report to Congress, 1993



Authority

The United States Grain Standards Act, as amended, requires the Administrator of the USDA Federal Grain Inspection Service to submit to the Senate and House Committees on Agriculture on December 1 of each year a report 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 from foreign purchasers and prospective purchasers of U.S. grain and of their resolution by the U.S. Department of Agriculture during the prior fiscal year. That summary is included as part of this Annual Report.

Mission

The mission of the Federal Grain Inspection Service 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.



United States
Department of
Agriculture

Federal Grain
Inspection
Service

P.O. Box 96454
Washington, DC
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December 1, 1993

■
Honorable E (Kika) de la Garza
Chairman, Committee on Agriculture
House of Representatives
Washington, DC 20515

Honorable Patrick J. Leahy
Chairman, Committee on Agriculture,
Nutrition, and Forestry
United States Senate
Washington, DC 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 1993 Annual Report to Congress. This report summarizes the Agency's responsibilities, accomplishments, program activities, and financial status.

During fiscal year 1993, FGIS continued efforts to improve the national grain inspection and weighing system. The Agency's key accomplishments included:

- * providing needed information by implementing new services, such as the official vomitoxin testing service;
- * addressing the needs of domestic and international customers of U.S. grain by issuing the final report of a study on changes in shiplot soybean quality conducted by FGIS and the Japan Oilseed Processors' Association;
- * facilitating the marketing of grain by amending the official U.S. standards for wheat and for sorghum to meet market needs;
- * improving the official services by integrating new technology, such as the near infrared transmittance instruments to analyze wheat protein, into the official system;
- * monitoring the safety of the Nation's food supply by increasing the number of pesticide residues tested for in wheat from 19 in fiscal year 1992 to 35 in fiscal year 1993; and
- * ensuring compliance with the U.S. Grain Standards Act and the Agricultural Marketing Act of 1946 by performing operational reviews and conducting investigations into alleged violations.



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

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

FGIS' operating revenues from fees during fiscal year 1993 were \$33.3 million, with obligations of \$33.1 million, yielding a positive net operating margin of \$225,000. Agency obligations increased nearly \$3.8 million from fiscal year 1992 levels, revenues increased by \$4.3 million, compared to the previous year.

The total revenues included interest of \$164,136 on investments held in reserve. The revolving fund closed the fiscal year with an unobligated balance of \$9.9 million in the trust account.

Administrative and supervision costs represented 19 percent of total program costs, which is below the statutory limit of 40 percent. Appropriated obligations of approximately \$10.7 million, plus revolving fund obligations of \$33.1 million totalled \$43.8 million. The fee-supported activities ended fiscal year 1993 at 76 percent of the total obligations.

The FGIS Advisory Committee was inactive during fiscal year 1993 pending completion of the Administration's review of Federal Government advisory committees.

FGIS continues to lead the efforts of the Committee on Grain Quality, as provided for in Title 20, Grain Quality, of the Food, Agriculture, Conservation, and Trade Act of 1990. The Committee is charged with providing information and advice on grain quality issues to the Committee on Agriculture of the House of Representatives and the Committee on Agriculture, Nutrition, and Forestry of the Senate. Member agencies are: Agricultural Marketing Service, Agricultural Research Service, Agricultural Stabilization and Conservation Service, Animal and Plant Health Inspection Service, Economic Research Service, Extension Service, FGIS, Foreign Agricultural Service, and National Agricultural Statistics Service. The Committee is guided by a charter that is an approved USDA regulation (Departmental regulation 2400-6, dated July 28, 1992).

FGIS remains committed to quality and to ensuring that the official grain inspection and weighing system remains second to none.

Sincerely,



David R. Galliard
Acting Administrator

Contents

Letter from the Administrator	i
Outlook 1994: Issues and Concerns	1
Functions and Responsibilities	3
<i>Oversight Responsibilities</i>	
<i>Services by State and Agency Type</i>	
<i>U.S. Agricultural Exports</i>	
<i>Number of Inspections Performed</i>	
<i>Under the U.S. Grain Standards Act</i>	
<i>Volume of U.S. Grain Inspected for Export by Port Locations</i>	
Organizational Structure	11
<i>Organizational Chart</i>	
<i>Permanent Full Time Employees</i>	
<i>Employment History</i>	
<i>Performance of Weighing and Inspection Services</i>	
Activities and Accomplishments	
Inspection and Weighing	17
<i>Inspection Program Data</i>	
<i>Weighing Program Data</i>	
Research and Development	22
Standardization Activities	24
Compliance Activities	26
<i>Overview of Compliance Activities</i>	
International Relations	29
<i>Importers' Complaints: 3-Year Summary</i>	
<i>Summary of Complaints Reported by Importers, FY 1993</i>	
<i>Briefings with Visiting Trade and Governmental Teams, FY 1993</i>	
<i>Activities Involving International Travel</i>	
Grain Dust Explosion Information	35
<i>Summary of Grain Dust Explosions</i>	
<i>Reported Grain Dust Explosion Data</i>	
Budget Information	36

Italics denote graphics.

The mention of firm names or trade products does not imply that they are endorsed or recommended by the U.S. Department of Agriculture over other firms or similar products.

Outlook 1994

Adding Water to Grain

On August 4, 1993, FGIS proposed a rulemaking action to prohibit the addition of water to grain. The proposal does not restrict naturally occurring moisture changes or the addition of water during milling, malting, or similar processing operations. The importance of the proposed action prompted FGIS to solicit input from the grain industry, academia, and other interested parties during an extended 120-day comment period that closed December 2, 1993. FGIS will review the comments received in response to the proposed action, determine the market impacts of possible alternatives, and prepare a final decision during fiscal year 1994.

Grain Cleaning Study

In June 1990, FGIS commissioned the USDA Economic Research Service to conduct a study to determine the costs and benefits of marketing cleaner grain. The study is part of FGIS' ongoing effort to evaluate how grain standards and inspection procedures should interact with the marketplace. The study also is the basis for implementing the requirements of Section 2005 of the Grain Quality Incentives Act of 1990 (7 U.S.C. 71 *et seq.* as amended by Title 20 Public Law No. 101-624).

The study addresses the costs and benefits of marketing cleaner wheat, corn, soybeans, barley, and sorghum. Individual reports for each commodity are being prepared, beginning with wheat.

FGIS received four separate reports comprising the wheat study in June 1993. The reports were (1) The Costs and Benefits of Cleaning U.S. Wheat: Overview and Implications, (2) Economic Implications of Cleaning Wheat in the United States, (3) The Role of Quality in Wheat Import Decisionmaking, and (4) country case study reports on "Determinants of Wheat Import Demand."

The wheat report concluded that cleaning all U.S. wheat for export above and beyond the current level is not economically feasible. The costs of cleaning at the lowest net-cost location, i.e., subterminal elevators for winter wheat and country elevators for spring wheat, would outweigh benefits by at least \$8 million per year in the short run. The economic benefits of selling clean wheat in international trade markets would total \$13 million in premium benefits and \$2 million in trade effects, but would not compensate for the domestic net costs of, at a minimum, \$23 million.

Reports on the costs and benefits of cleaning corn, barley, sorghum, and soybeans are expected to be completed during fiscal year 1994.

Regulatory Review

FGIS plans to propose amendments to the regulations under the U.S. Grain Standards Act to reduce unnecessary information collection requirements and eliminate policies that prove burdensome to the grain industry and official personnel. These changes are intended to better address today's inspection, weighing, and marketing practices, and to promote a better understanding of procedures governing the national inspection and weighing system.

FGIS also will review the regulations under the Agricultural Marketing Act of 1946 to assess the need for revising and the potential for improving the regulations. FGIS will solicit public comments on the current regulations and propose changes based on the input received.

Outlook 1994, continued

Wheat Classification

FGIS, in cooperation with the Agricultural Research Service (ARS) and the Agricultural Marketing Service (AMS), is continuing to develop an objective wheat classification system. Rather than relying on subjective visual inspection that determines kernel color and morphology, the new system will objectively assess single kernel hardness to differentiate between hard and soft wheat classes.

Through a cooperative agreement with ARS, a single kernel hardness tester (SKHT) suitable for commercial production and sale was developed in fiscal year 1993. After running performance tests on the commercial models, FGIS initiated a field study in June 1993 to determine the reproducibility and repeatability of the instruments under field conditions.

FGIS is continuing to collect information on the performance of the SKHT. In fiscal year 1994, FGIS will conduct a 1-year market comparison of the SKHT classification system and the current visual classification system.

Functions and Responsibilities

The Federal Grain Inspection Service (FGIS) was created by Congress in 1976 to manage the national grain inspection system, initially established in 1916, and to institute a national grain weighing program. The goal of creating a single Federal grain inspection entity was to ensure development and maintenance of uniform U.S. standards, to develop inspection and weighing procedures for grain in domestic and export trade, and to facilitate grain marketing.

FGIS administers uniform, national grain inspection and weighing programs established by the U.S. Grain Standards Act, as amended (hereinafter, the Act). Services under the Act are performed on a fee basis for both export and domestic grain shipments. The Act requires generally 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.

In administering and enforcing the Act, FGIS:

- * establishes and maintains official U.S. grain standards for barley, canola, corn, flaxseed, oats, rye, sorghum, soybeans, sunflower seed, triticale, wheat, and mixed grain;
- * promotes uniform application of official U.S. grain standards by official inspection personnel;
- * establishes methods and procedures, and approves equipment for the official inspection and weighing¹ of grain;
- * provides official inspection and weighing services at certain U.S. export port locations², and official inspection of U.S. grain at certain export port locations in eastern Canada along the St. Lawrence Seaway;

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 any site in the United States that contains one or more export elevators and is identified by FGIS as an export port location.

- * delegates qualified State agencies to inspect and weigh grain at certain U.S. export port locations;
- * designates qualified State and private agencies to inspect and weigh grain at interior locations;
- * licenses qualified State and private agency personnel to perform inspection and weighing services;
- * provides Federal oversight of the official inspection and weighing of grain by delegated States and designated agencies;
- * provides review inspection services³ of U.S. grain in the United States and at certain export port locations in eastern Canada;
- * investigates, in cooperation with the Office of Inspector General, apparent violations of the Act and initiates appropriate corrective action; and
- * monitors the quality and weight of U.S. grain as received at destination ports, and investigates complaints or discrepancies reported by importers.

Mandatory Services

Under provisions of the Act, most grain exported from U.S. export port locations must be officially weighed. A similar requirement exists for inspection, except for grain which is not sold or described by grade. Intercompany-barge grain received at export port locations also must be officially weighed. And, the Act requires that all corn exported from the U.S. be tested for aflatoxin prior to shipment, unless the contract stipulates that testing is not required.

Mandatory official inspection and weighing services are provided by FGIS on a fee basis at 57 export elevators. Eight delegated States provide official services at an additional 22 export elevators under direct FGIS oversight.

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 also is exempt from official inspection and weighing requirements.

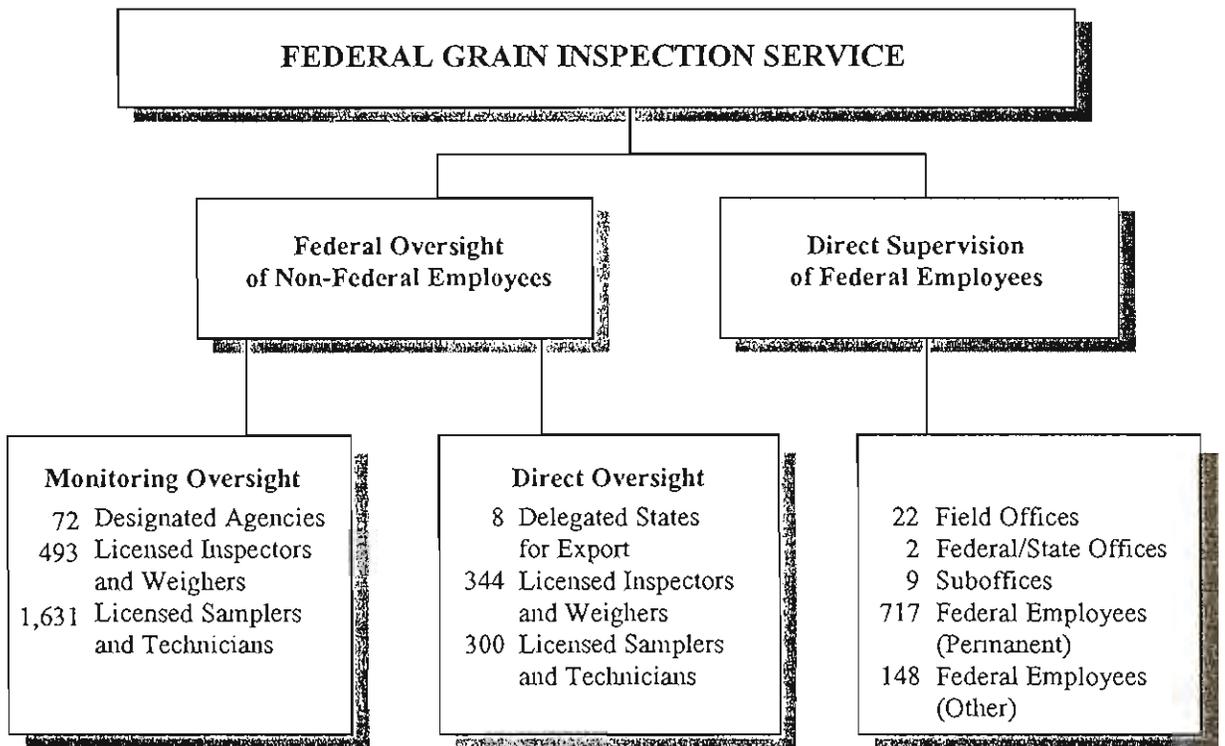
3. Review Inspection Service. A reinspection, appeal inspection, or Board appeal inspection service performed when discrepancies are alleged between the true quality of the grain and the inspection results.

Permissive Services

Official inspection and weighing of U.S. grain in domestic commerce are performed upon request and require payment of a fee by the applicant for services. Domestic inspection and weighing services are provided by 72 designated agencies that employ personnel 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 (hereinafter, the "AMA"), FGIS administers and enforces certain inspection and standardization activities related to rice, pulses, and processed grain products such as flour and corn meal, as well as other agricultural commodities. Services under the AMA are performed upon request on a fee basis for both domestic and export shipments by either FGIS employees or individual contractors, or through cooperative agreements with States.

Oversight Responsibilities

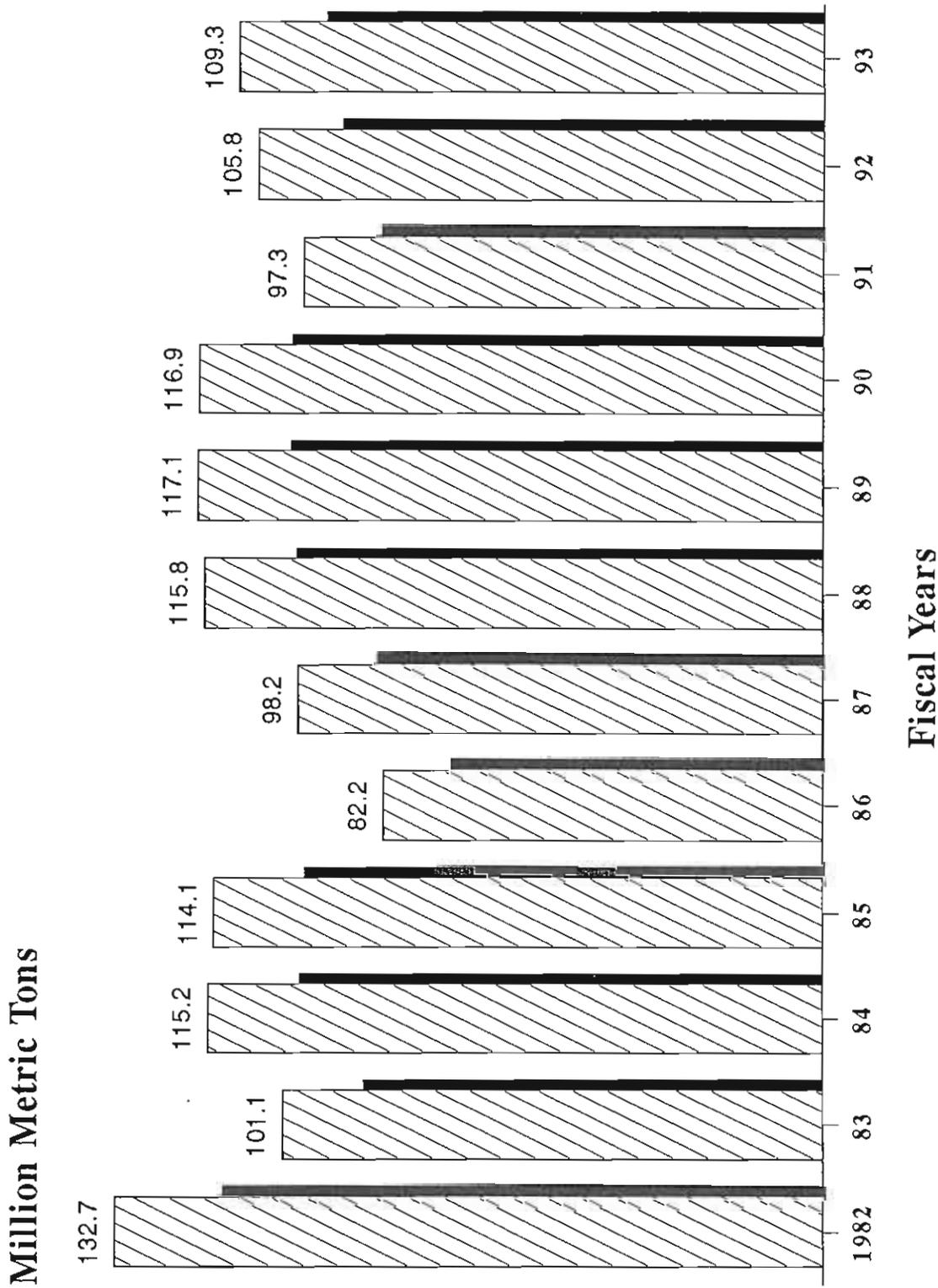


Services by State and Agency Type

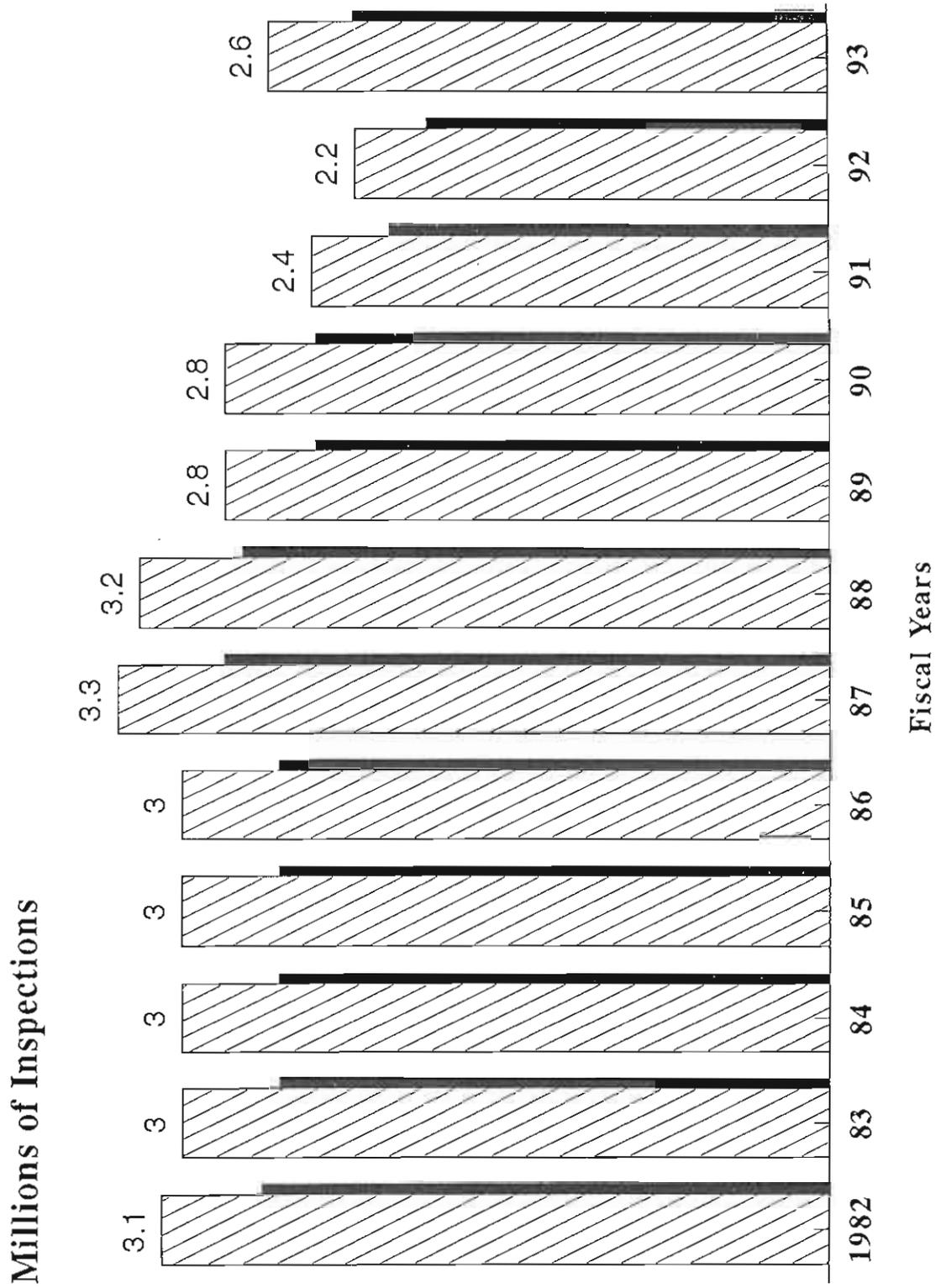
State	Federal or Federal/State	Delegated State	Designated State	Designated Private
Alabama		•	•	
Alaska			•	
Arizona				
Arkansas				•
California		•*	•	•
Colorado				•
Connecticut				
Delaware				
Florida				
Georgia	•		•	
Hawaii				
Idaho				•
Illinois	•			•
Indiana				•
Iowa				•
Kansas			•	
Kentucky				•
Louisiana	•		•	
Maine			•	
Maryland	•			
Massachusetts				
Michigan	•			•
Minnesota		•	•	
Mississippi		•	•	
Missouri			•	
Montana			•	
Nebraska				•
Nevada				
New Hampshire				
New Jersey				
New Mexico				•
New York			•	
North Carolina			•	
North Dakota				•
Ohio	•			•
Oklahoma				•
Oregon	•		•	
Pennsylvania				
Rhode Island				
South Carolina		•	•	
South Dakota				•
Tennessee				•
Texas	•			•
Utah			•	
Vermont				
Virginia		•	•	
Washington		•*	•	
West Virginia				
Wisconsin		•	•	
Wyoming			•	•

* Federal/State agreement.

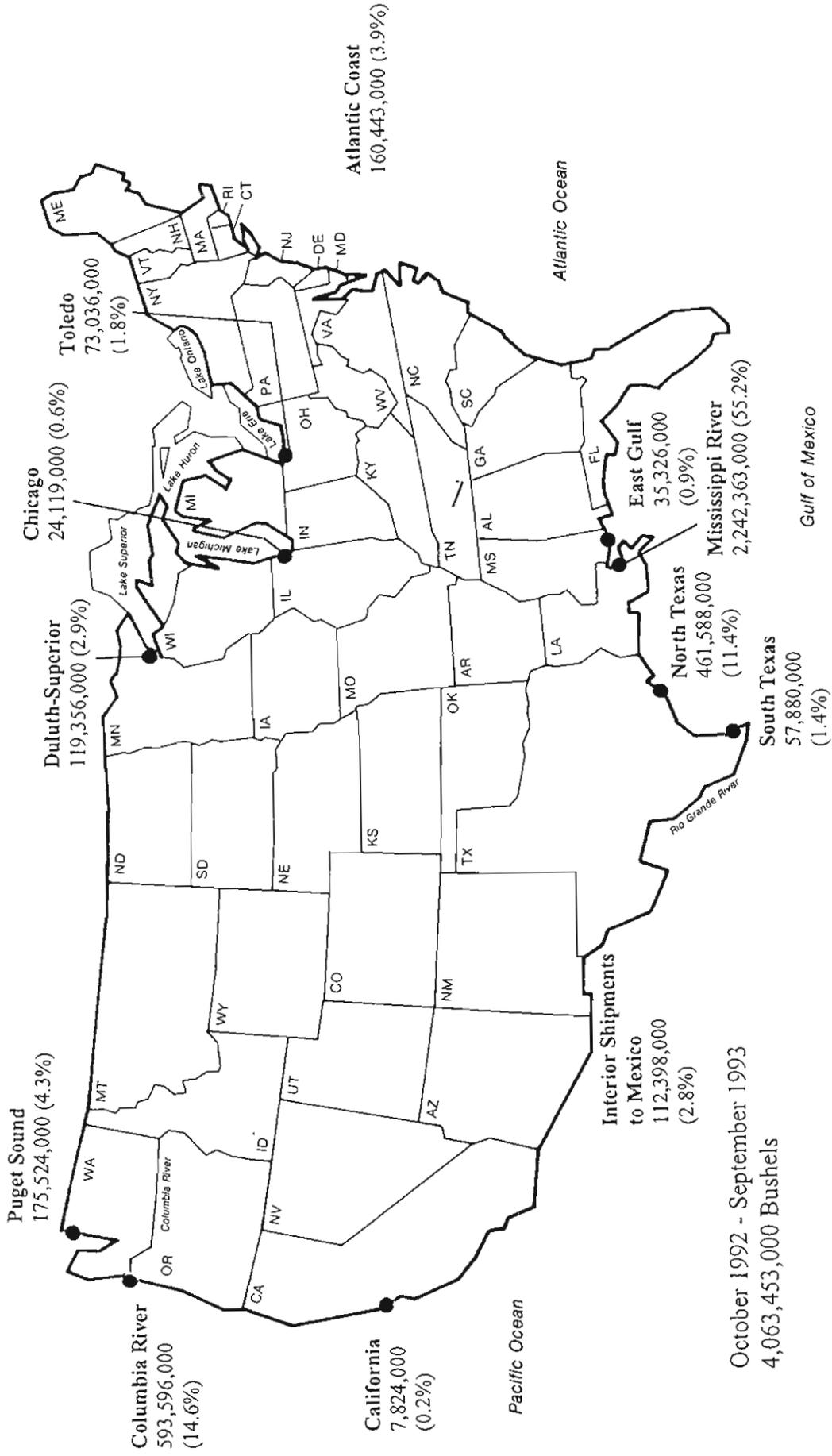
U.S. Agricultural Exports-Coarse Grains Wheat, Soybeans, Sunflower, Canola, and Rice



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



Volume of U.S. Grain Inspected for Export by Area Fiscal Year 1993

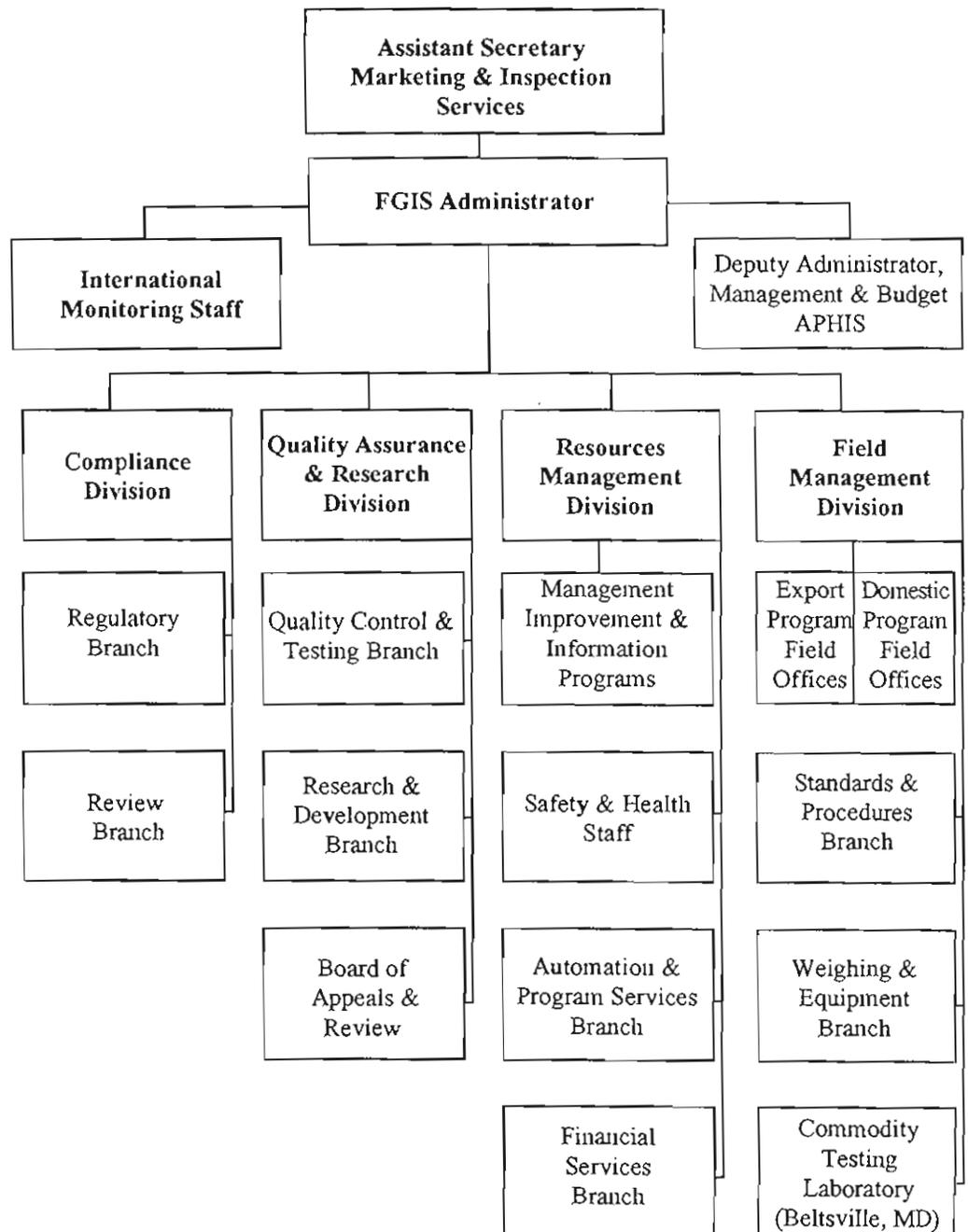


October 1992 - September 1993
4,063,453,000 Bushels

Organizational Structure

FGIS is an Agency that reports to the Assistant Secretary for Marketing and Inspection Services, U.S. Department of Agriculture. FGIS is composed of two headquarters units, 22 field offices, 2 Federal/State offices, and 9 suboffices.

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.



FGIS Divisions

The **Compliance Division** ensures that the Act, applicable provisions of the AMA, and applicable regulations are implemented accurately and uniformly. The Division:

- * evaluates alleged violations and initiates preliminary investigations, and assists USDA's Office of Inspector General on investigations involving criminal violations of the Act and the AMA;
- * initiates enforcement/administrative actions for violations of the Act, applicable provisions of the AMA, and applicable regulations;
- * administers the program for delegating State agencies and designating official agencies and licensing official agency personnel to perform official functions, and monitors their performance;
- * reviews and, when appropriate, approves official agency fee schedules;
- * identifies and monitors official agency and licensee conflicts of interest;
- * registers firms that export U.S. grain;
- * conducts management evaluations and technical reviews of FGIS' operations and programs, and monitors appropriate corrective actions;
- * responds to audits and surveys of FGIS programs;
- * coordinates litigation proceedings involving FGIS personnel and/or records; and,
- * administers the program to ensure that management control and accountability comply with governmental standards.

The **Field Management Division**, the largest division within FGIS, directs and oversees the operation of all FGIS field offices, Federal/State offices, and delegated and designated agencies. The Division also:

- * establishes U.S. standards for grain, rice, and pulses;
- * develops inspection and weighing policies and procedures;
- * performs original inspection and weighing of export grain;
- * monitors the quality of grain as it moves through the market;
- * licenses official agency personnel;
- * samples and inspects processed grain products;
- * oversees the Commodity Testing Laboratory in Beltsville, Maryland;
- * provides quality assurance functions for the USDA Agricultural Stabilization and Conservation Service and the Department of Defense Personnel Support Center; and
- * tests processed grain products for producers, school lunch programs, military rations, and shipments to needy countries throughout the world.

The **Quality Assurance and Research Division** is responsible for research, development, technical training, and quality control programs. The Division:

- * develops new tests and methods for determining grain quality;
- * provides reference standards for FGIS methods and develops new reference standards, as required;
- * develops criteria and recommends specifications for instruments to improve the reliability of grain inspection;
- * develops and maintains an agencywide quality control program covering all aspects of grading and inspection;
- * maintains the uniform application of grain and commodity standards;
- * renders final decisions on inspection appeals; and
- * conducts technical training for field personnel.

The **Resources Management Division** administers programs that provide budget, financial, automation, directives, regulatory, health, safety, and training services to the Agency. The division coordinates, evaluates, and negotiates all resources needed to provide administrative support services for FGIS operations.

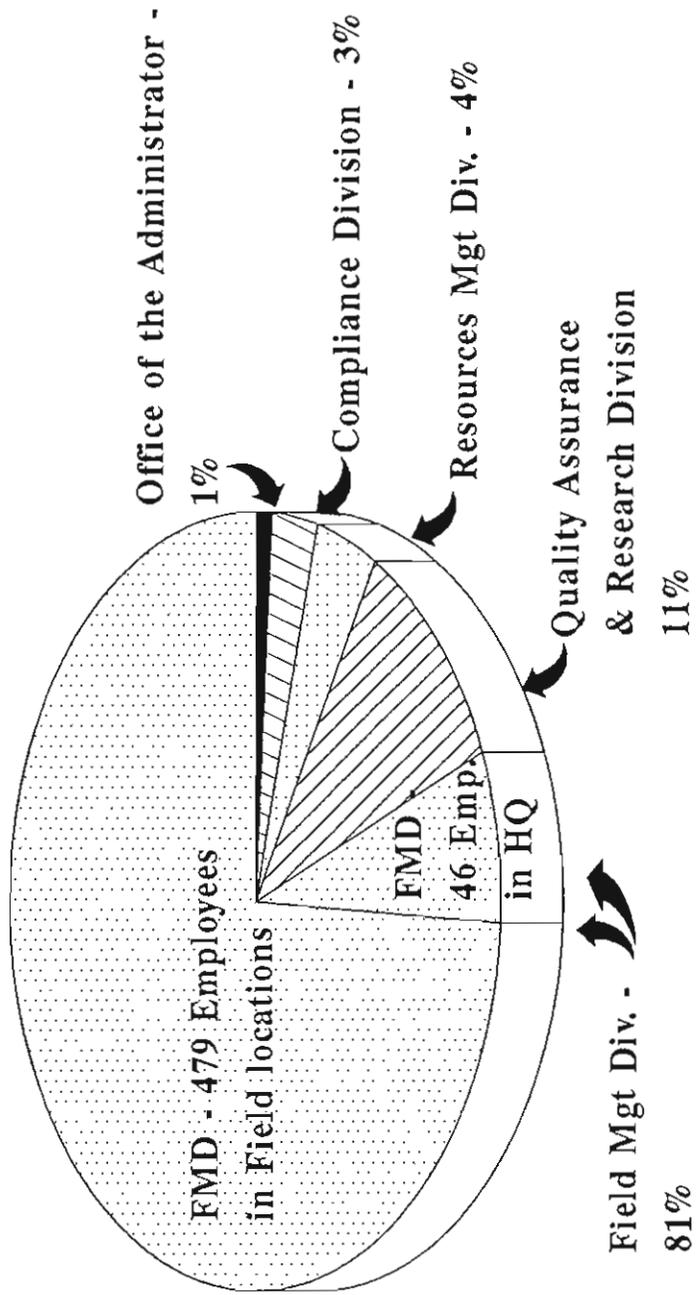
The **International Monitoring Staff (IMS)** is part of the Office of the Administrator. The IMS:

- * monitors the quality and weight of grain shipments between origin and destination ports;
- * prepares written or onsite responses to grain quality or weight complaints received through the Foreign Agricultural Service and other sources;
- * briefs representatives of importing countries (agricultural officials, buyers, end users, and others), both in the U.S. and abroad, on the roles and responsibilities of FGIS; and,
- * works closely with USDA sister agencies, the Food and Drug Administration, and USDA cooperator organizations to increase awareness of FGIS roles and responsibilities in the United States and abroad.

FGIS Field Offices

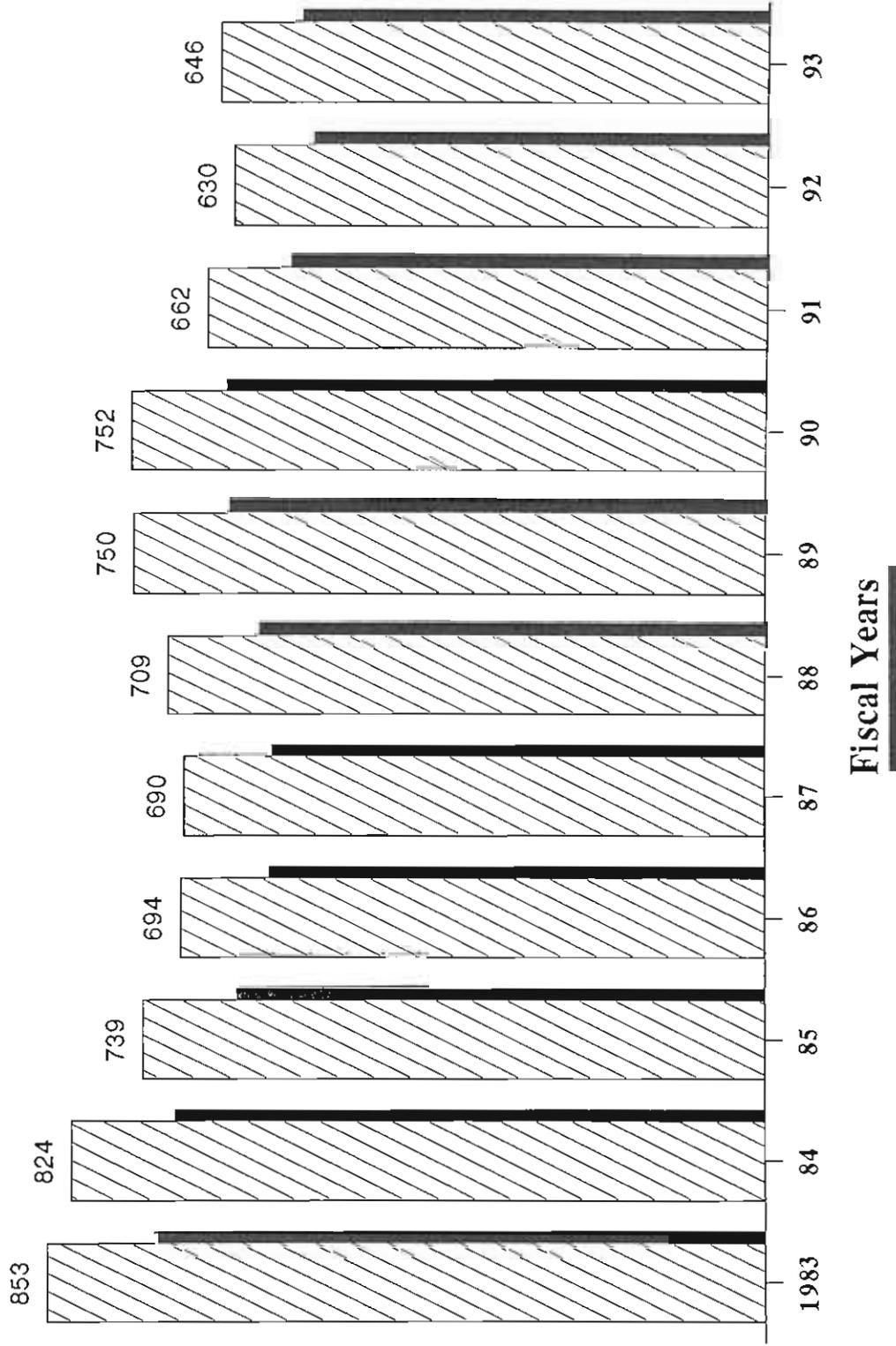
FGIS field personnel are located across the Nation, thus ensuring the availability of official inspection and weighing services anywhere in the United States. FGIS personnel also are located in eastern Canada to provide inspection of U.S. grain at Canadian ports.

FGIS Permanent Full-Time Employees, FY 1993



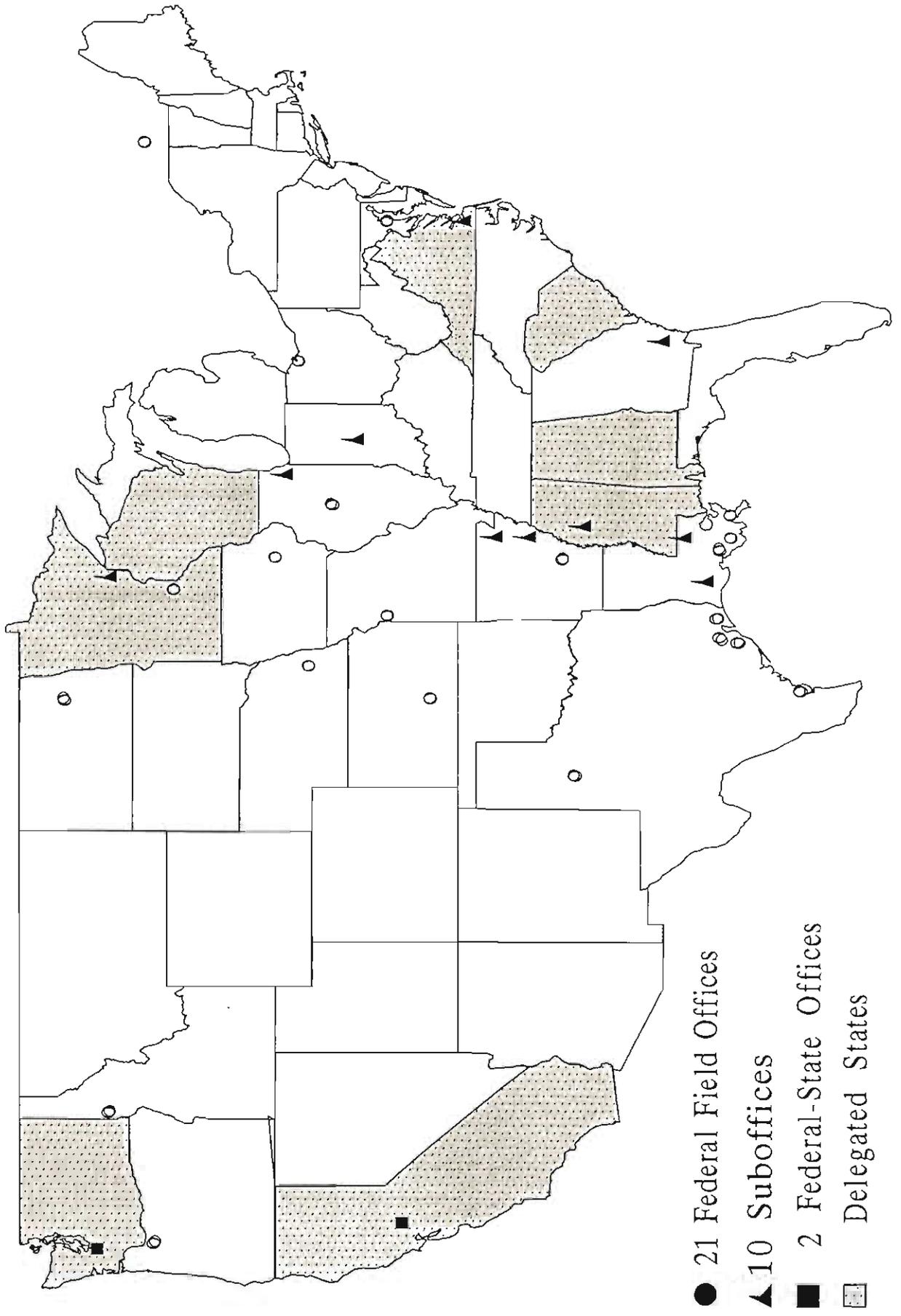
Federal Grain Inspection Service Full-Time Permanent Employment, FY 1983-93

Number of Employees



Federal Grain Inspection Service

Performance of Weighing and Inspection Services



Inspection and Weighing

Automation	<p>FGIS' efforts to integrate modern technology into official field inspection and weighing services continue to show very positive results. Technical parameters provided to the industry have resulted in proposals to install automated systems at eight export elevators. Grain elevators installing a system to automate the weighing and material handling supervision processes can potentially save over \$96,000 per shift per year, based on the published hourly contract rate.</p> <p>FGIS also is developing software to automate the export inspection statistical ship loading plan. This new system will improve accuracy and efficiency by minimizing manual data collection and calculations, and will permit direct data sharing with customers and remote FGIS offices.</p>
Barge Fumigation Procedures	<p>To facilitate the marketing and certification of bulk grain and rice transported by river barge, FGIS developed procedures to permit stationary (static) fumigation to correct insect infestation as part of the original inspection service. The fumigation procedure does not automatically remove the special grade "Infested" for grain and Rough rice, or the U.S. Sample grade designation for Brown rice from the inspection certificate because the efficacy of the fumigation cannot be confirmed. The inspection certificate will reflect the quality factor results obtained from the original sample and report infestation based on a condition examination conducted after fumigation.</p>
Informational Videos	<p>FGIS developed two videos, From Harvest to Harbor and A Question of Quality. From Harvest to Harbor is a brief informational video describing FGIS' basic functions and is directed towards audiences with general agricultural backgrounds.</p> <p>A Question of Quality describes diverter-type (D/T) sampling and related techniques, and is being used to train official grain samplers. The video provides FGIS and licensed samplers with a clear understanding of all aspects of D/T sampling and related activities, including how to conduct stowage examinations and perform prior-to-operation checks. It also provides detailed information and actual demonstrations of each task performed by D/T sampler attendants.</p>
NIRT Wheat Protein Testing	<p>On May 2, 1993, FGIS initiated official wheat protein inspections using a new technology, Near Infrared Transmittance (NIRT). The near infrared reflectance instrument, which was previously used to determine wheat protein, analyzed ground wheat samples. Because the NIRT instruments analyze whole grain samples, this new technology will improve the consistency among official wheat protein test results and reduce the overall costs of official inspection due to reduced labor.</p>

Inspection and Weighing, continued

Reconditioning Aflatoxin Contaminated Corn

FGIS, the Food and Drug Administration (FDA), and the grain industry met several times in fiscal year 1993 to discuss industry's concerns regarding the reconditioning and disposition of aflatoxin-contaminated corn. As a result of these meetings, FDA established a reconditioning and resampling process for aflatoxin-contaminated corn lots.

FDA permits reconditioning of aflatoxin-contaminated corn lots by mechanical cleaning. Only one attempt at reconditioning is allowed. FGIS plays an important role in assisting FDA in the reconditioning process at export port locations. FGIS must observe the cleaning process, sample the reconditioned lot using a diverter-type mechanical sampler, analyze the samples for aflatoxin, and report aflatoxin results of reconditioned lots and screenings to FDA. The grain industry must comply with FDA disposition policy based on the results obtained after reconditioning.

Vomitoxin Testing Services

The presence of vomitoxin in this year's wheat and barley crops created a market need for official vomitoxin testing. In September 23, 1993, FGIS published an interim rule announcing the immediate availability of official vomitoxin testing services for grain under the authority of the Act. In response to the market's demand for rapid, onsite testing capabilities, FGIS implemented the official services using quick test kits at field locations. FGIS, delegated States, and designated agencies currently are providing the grain industry with official vomitoxin testing service, upon request.

Water in Grain Issues

In 1992, several foreign and domestic grain merchants expressed concern over potential quality degradation due to water applications to grain. They contended that the primary purpose of the applications was to increase the weight of grain.

In response to these concerns, FGIS published in the January 8, 1993, Federal Register (58 FR 3211) a final rule that amended the regulations to require a "disclosure" statement on official export inspection and weight certificates whenever water is applied to export grain at export port locations. The purpose of this action was to ensure that foreign buyers of U.S. grain are informed when water has been applied to U.S. export grain. This action did not address non-export grain.

The concerns also resulted in USDA's Office of Inspector General, with FGIS' assistance, active involvement in an investigation of a major grain firm that is alleged to have applied water to grain to increase the weight of the grain.

During and since development of the aforementioned regulations, numerous grain industry groups voiced concerns about the effect of water application on all grain, whether or not such grain is exported from the U.S. or even offered for official inspection and weighing services. These groups and many individual firms maintain that applying water to grain poses a risk to grain quality and can provide a strong incentive to improperly increase weight.

In response to these concerns, FGIS proposed prohibiting the application of water to grain in the August 4, 1993, Federal Register. This proposed action would not restrict either naturally occurring moisture changes or the addition of water during milling, malting, or similar processing operations. A final decision on the proposed action will be made in fiscal year 1994.

Inspection Program Data

Item	Fiscal Years		
	1991	1992	1993
Quantity of Grain Produced* (MMt) <u>1/</u>	363.9	333.4	411.2
Quantity of Grain Officially Inspected (MMt)			
Domestic	159.9	143.9	149.3
Export by FGIS	77.4	85.6	87.9
by Delegated States	<u>17.5</u>	<u>17.8</u>	<u>18.8</u>
Total	254.8	247.3	256.0
Number of Delegated States/Official Agencies	73	72	72
Number of Official Original, Reinspection, and Commercial Inspections			
FGIS	154,742	146,405	165,847
Delegated States/Official Agencies	<u>2,267,962</u>	<u>2,218,069</u>	<u>2,448,417</u>
Total	2,422,704	2,364,474	2,614,264
Number of Grain Inspection Appeals			
Field Offices	6,320	4,946	8,000*
BAR	469	569	1,500*
Number of Commercial Inspections			
FGIS	N/A	2,633	10,630
Delegated States/Official Agencies	N/A	<u>36,681</u>	<u>128,369</u>
Total	N/A	39,314	138,999
Number of Wheat Protein Inspections			
FGIS	51,582	47,697	63,824
Delegated States/Official Agencies	<u>446,070</u>	<u>460,074</u>	<u>599,657</u>
Total	497,652	507,771	663,481
Number of Soybean Protein and Oil Inspections			
FGIS	10,089	11,444	14,180
Delegated States/Official Agencies	<u>3,423</u>	<u>4,344</u>	<u>4,715</u>
Total	13,512	15,788	18,895
Number of Aflatoxin Inspections	48,317	59,372	59,901

continued

- * Estimate
- 1. Million metric tons.

Inspection Program Data,
continued

Item	Fiscal Years		
	1991	1992	1993
Number of Official Inspection Supervisions			
Field Office Grain Inspection.	37,340	39,862	45,000*
BAR Grain Inspection <u>2/</u>	10,113	9,812	8,100*
Rice Free Fatty Acid	372	552	525
Soybean Protein and Oil	2,160	1,877	2,348
Sunflower Oil	1,641	2,352	2,000
Wheat Falling Number	147	69	0 ^{4/}
Wheat Protein <u>3/</u>	39,412	46,650	54,224
Aflatoxin	1,054	1,679	1,680
Quantity of Rice Inspected (MMt) (milled basis)	3.1	3.9	4.6

- * Estimate.
- 2. Board of Appeals and Review.
- 3. Includes field office and QARD samples.
- 4. Falling Number monitoring was suspended pending implementation of a new analysis procedure.

Weighing Program Data

Item	Fiscal Years		
	1991	1992	1993
Official Weight Certificates Issued			
FGIS			
Class X*	84,653	80,849	89,760
Class Y**	<u>30,283</u>	<u>25,495</u>	<u>14,582</u>
Total	114,936	106,344	104,342
Delegated States/Official Agencies			
Class X*	36,599	37,214	46,846
Class Y**	<u>131,561</u>	<u>139,316</u>	<u>138,987</u>
Total	168,160	176,530	185,833
Exported Grain Weighed (MMt)			
FGIS	75.5	85.6	85.0
Delegated States	<u>17.5</u>	<u>17.8</u>	<u>18.8</u>
Total	93.0	103.4	103.8
Number of Certified Scales in Service			
Export Elevators	312	321	325
Number of Railroad Track Scales Tested	124	138	121

* Class X involves 100 percent supervision.

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

Research and Development

Mycotoxins

Very wet growing conditions in the Midwest and hot, dry temperatures in the South during the 1993 crop year caused a great deal of concern about the presence of mycotoxins in U.S. grain. Mycotoxins are toxic substances produced by a variety of molds and fungi. Both aflatoxin and deoxynivalenol (vomitoxin) appeared in this year's crop. To determine the accuracy of field test methods, FGIS developed reference methods for the analysis of aflatoxin, vomitoxin, fumonisin, and zearalenone (ZEA). In addition, field test kits for vomitoxin, ZEA, and fumonisin were examined in collaborative studies. As a result of these studies, vomitoxin testing was offered in the official inspection system. Evaluations of other mycotoxin test kits suitable for field use will continue in fiscal year 1994.

Grain Odor

Musty, sour, and commercially objectionable foreign odors are important grain grading factors. Two separate collaborative studies on odor detection being conducted by ARS and FGIS scientists are continuing. In fiscal year 1993, data obtained from an expert sensory panel at the Sensory Analysis Center, Kansas State University, and from chemical analyses carried out by ARS chemists were incorporated to produce threshold levels for several compounds that were found to be responsible for many of the objectionable odors in grain. ARS scientists then began chemically analyzing approximately 160 test samples from market channels using a laboratory prototype of a potential odor detection instrument and classifying the samples as either "sound" or "sample grade" using the threshold levels. Analyses of the samples should be completed by the end of calendar year 1993. Results will be compared with those obtained from inspectors in the official inspection system.

In a second project, ARS engineers developed a sample holder that was designed to protect inspectors from inhaling particulate material such as dust and mold spores as they smell grain samples. The availability of such a holder is important because it may never be possible to build an objective odor detector that can detect all of the objectionable odors that occur in grain. During fiscal year 1993, the holder was compared against the standard method of grain odor analysis in a blind sample study. Results showed that using the holder did not cause a change in the type odor designation given to samples or the level of odors detected. During fiscal year 1994, the holder will be tested in 10 FGIS field offices.

Insect Infestation

FGIS continues to support the development of a test kit designed to detect insect infestation in grain and other commodities. The current commercially available test kit can divide samples into very low, low, medium, and high infestation categories. The kit also can report the level of infestation in processed commodities with greater repeatability than the insect fragmentation count method currently being used for this purpose. Future tests will determine the usefulness of this test kit in the official inspection system.

FGIS also is supporting ARS' development of an acoustical detector that can measure the total amount of live infestation, both hidden and visible, in grain and other commodities. Early prototypes of this instrument could detect infestation levels of 1 insect per 1,000-gram sample. They could not, however, correctly count the number of insects present when insects were close together in the sample. Alterations are being made to solve this problem, and modified prototypes will be available for testing by FGIS in 1994.

Pesticide Residue Analysis

The survey of U.S. wheat samples for the presence of pesticide residues continues. Pesticides are being extracted from samples using state-of-the-art supercritical fluid extraction techniques. In fiscal year 1993, FGIS increased the number of residues analyzed from 19 to 35. To date, approximately 260 domestic and 290 export wheat samples representing all of the major classes have been analyzed. Chlorpyrifos methyl (Reldan) and malathion continue to be the only residues found in a significant portion of the samples. All of the residue concentrations found were well below EPA tolerance levels. Test kits that will allow inspectors to screen samples for the presence of these two pesticides are being evaluated for possible use in the official inspection system.

Early in calendar year 1994, FGIS hopes to offer, for a fee, a pesticide residue testing service of wheat samples for the 35 residues tested in the survey. Samples will be analyzed at the FGIS Technical Center in Kansas City, MO. FGIS is continuing efforts to expand the survey and analysis service to other grains.

Wheat Classification

FGIS, ARS, AMS, and the industry-sponsored Wheat Classification Working Group continued their collaborative effort to develop a wheat classification system based on objective test results rather than kernel morphology. In 1993, six commercial prototypes of a single kernel tester were examined under field conditions. These instruments measure the hardness, weight, diameter, and moisture content of each kernel at a rate of approximately 100 kernels per minute. They performed extremely well during the 10-week field trials. The data analysis from this study will be completed early in fiscal year 1994. Also in fiscal year 1994, approximately 6,000 samples from the 1993 crop year will be analyzed using these instruments and near-infrared reflectance instruments. The data from these analyses will be used to refine the proposed wheat classification system.

Standardization Activities

Codex Alimentarius Commission

As an active member of the U.S. Delegation to the Codex Alimentarius Commission Committee on Cereals, Pulses, and Legumes, FGIS drafted the following revised worldwide and regional Codex standards for cereals and cereal products: wheat flour, maize (corn), whole maize (corn) meal and maize (corn) grits, degermed maize (corn) meal and maize (corn) grits, certain pulses, sorghum grains, sorghum flour, durum wheat semolina and durum wheat flour, gari, whole and decorticated pearl millet grains, pearl millet flour, edible cassava flour, and processed couscous. The standards retain only the essential provisions used by governments as regulatory control measures for health, safety, and consumer protection concerns, as well as the elements needed to assure fair trade practices and protection against fraud. The revised standards will be discussed at the committee's October 1994 session in Washington, D.C.

Standardizing Commercial Grain Inspection Equipment

FGIS continued to provide leadership in a cooperative effort with the National Conference on Weights and Measures (NCWM) to develop equipment testing and calibration programs for grain moisture meters and near infrared (NIR) wheat protein analyzers. During fiscal year 1993, FGIS provided technical and administrative support for three meetings of the technical sectors responsible for developing specifications, tolerances, and test procedures for commercial grain inspection equipment.

The NCWM adopted proposed changes to its Moisture Meters Code at its 1993 annual meeting. FGIS is preparing to serve as a National Type Evaluation Program (NTEP) laboratory to evaluate commercial moisture meters, using the newly revised Code, during fiscal year 1994. FGIS also plans to conduct a calibration data collection program for the moisture meter models that meet the prescribed design requirements and pass the performance tests.

A technical sector prepared a new Code for NIR wheat protein analyzers that will be formatted by the National Institute for Standards and Technology (NIST), discussed at the NCWM interim meetings in January 1994, and possibly adopted at the NCWM annual meeting in July 1994. If the Code is adopted in fiscal year 1994, FGIS will serve as an NTEP laboratory for evaluating and calibrating NIR wheat protein analyzers beginning in fiscal year 1995.

U.S. Standards for Beans

On March 16, 1993, FGIS published in the *Federal Register* (58 FR 14174) a notice that the U.S. Standards for Beans were under review. FGIS believed that these standards were meeting the needs of producers, warehouse managers, shippers, and all others who handle or market beans. Consequently, no changes were planned or proposed. Interested parties were invited to participate in the rulemaking process by submitting written comments and/or recommendations on the official standards. During the 60-day comment period, two comments were received. Based on these comments, FGIS developed an "Advance Notice of Proposed Rulemaking" that seeks comments on recommended changes by the commenters to the U.S. Standards for Blackeye and Baby Lima Beans.

U.S. Standards for Grain

FGIS implemented revised standards for wheat on May 1, 1993, and for sorghum on June 1, 1993. Development of these new standards was based on the evaluation of 28 comments received on the wheat standards proposal and 29 comments received on the sorghum standards proposal.

FGIS is continuing its review of the barley standards. FGIS solicited input from the barley industry on a discussion paper developed by the Agency, and at a meeting hosted by the Washington Barley Commission in Pasco, WA, in May 1993. A proposed rule soliciting comments and a final rule are expected during fiscal year 1994.

FGIS also initiated discussions regarding a review of standards for corn, sunflower seed, flaxseed, oats, rye, triticale, and mixed grain. FGIS plans to propose action on these grains and oilseeds during fiscal year 1994.

U.S. Standards for Rice

In the January 11, 1993, *Federal Register* (58 FR 3511), FGIS proposed revising the U.S. Standards for Rice. Specifically, FGIS proposed to revise the U.S. Standards for Rough Rice, Brown Rice for Processing, and Milled Rice by establishing a special grade for aromatic rice, and eliminating the requirement that Rough rice and Brown rice for processing must contain more than 25 percent of whole kernels in order to be classed as long grain, medium grain, short grain, or mixed Rough rice or Brown rice for processing. Based on the 14 comments received in response to the proposed action, FGIS prepared a final rule to implement the changes to the rice standards. The final rule is scheduled to be published in the *Federal Register* during fiscal year 1994.

Compliance Activities

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

FGIS ensures, through reviews, evaluations, and, as necessary, enforcement actions, that the Act, applicable provisions of the AMA, and the regulations, procedures, and policies issued under the statutes are implemented properly and uniformly.

Management Control Program

FGIS established and maintains, at all levels of the organization, an effective checks-and-balances system of program, accounting, and administrative control. Agency programs and activities are reviewed against Government standards to ensure that controls and security measures are adequate; clientele are satisfied with services provided; operations are cost effective and comply with applicable laws and regulations; information collected and/or generated is managed properly; assets and resources are safeguarded against theft, fraud, waste, and abuse and are accounted for properly; and program expenditures comply with applicable laws and regulations and are accounted for properly. The management control program also includes plans for correcting noncompliances and inconsistencies and for conducting follow-up reviews to ensure that problem areas have been resolved and are operating as prescribed.

The program assists FGIS in effectively evaluating procedural conformance and operational efficiency nationwide, determine the adequacy of control measures, and identify vulnerabilities that may deter accomplishment of the Agency's mission or that may affect the integrity of the official grain inspection and weighing system.

Reviews conducted during fiscal year 1993 indicated that the Agency and the official system are fundamentally sound, operating with sufficient controls and security measures, and comply with applicable statutes and regulations.

Compliance Reviews

Compliance reviews, a component of FGIS' management control program, are third-party reviews of FGIS' field office circuits. During fiscal year 1993, FGIS reviewed the circuits of four FGIS field offices and the two Federal/State offices, and the scale testing programs of two field office locations to evaluate management effectiveness and procedural compliance. Sixteen designated official agencies were also reviewed to determine whether they meet the criteria for designation. Most of the offices were found to be well managed, performing satisfactorily, and meeting FGIS' mission.

As part of all compliance reviews, FGIS interviews applicants for service and official personnel to ensure that there is no discrimination in the delivery of official services. No instances of discrimination in service were identified in fiscal year 1993.

Delegation and Designation Program	<p>Seventy-two State and private agencies are designated to provide official services at interior locations. Of these, eight are State agencies that also are delegated to perform official inspection and weighing services at export locations.</p> <p>Under triennial renewal procedures, 21 official agency designations automatically terminated in fiscal year 1993. Twenty designations were renewed for 3-year terms after performance reviews were conducted. Based upon significant problems identified during an investigation conducted by USDA's Office of Inspector General and FGIS, the Agency determined that one official agency was not qualified to be renewed at one of its four service points. Consequently, FGIS assigned the one point to another currently designated agency. The incumbent official agency's designation at the remaining three points was renewed for a 12-month interim period, during which FGIS will determine whether the agency is performing adequately at those points.</p>
Conflicts of Interest	<p>At the beginning of fiscal year 1993, all five of the designated agencies granted discretionary conflict-of-interest waivers were operating without significant problems.</p> <p>FGIS evaluated 23 conflict-of-interest situations involving licensed personnel. Exceptions, which are granted on the basis of an individual's agreement to comply with specified conditions, were granted to 15; 5 did not constitute a conflict of interest; 1 licensee was denied an exception; and 2 general inquiries were handled.</p>
Alleged Violations and Case Activity	<p>At the beginning of fiscal year 1993, 12 cases involving alleged violations of the Act and the AMA were pending further action. During this fiscal year, 15 cases were opened and 12 cases were closed, leaving 15 cases pending action.</p> <p>Alleged violations during this fiscal year included deceptive grain handling and loading practices; use of improper sampling procedures; altering official samples and certificates; unreported conflicts of interests; and prohibited blending practices in violation of the Grain Quality Improvement Act.</p> <p>In addressing the 15 cases opened during fiscal year 1993, FGIS conducted six onsite investigations. One case was referred to the Food and Drug Administration. The remaining cases were addressed by evaluating information gathered and submitted by FGIS field office personnel.</p> <p>Administrative action was taken in 10 of the 12 cases closed. One was closed due to insufficient evidence to substantiate a violation, and one was closed based on criminal proceedings that were taken by the U.S. attorney's office. Three actions were handled in judicial or administrative proceedings, which required that FGIS personnel testify, give written or oral depositions, or supply official records.</p>
Registration to Export Grain	<p>During calendar year 1993, FGIS issued 92 Certificates of Registration to firms that export grain for sale; or handle, weigh, or transport grain for sale in foreign commerce.</p>

Overview of
Compliance Activities
Fiscal Year 1993

Item	Fiscal Years		
	1991	1992	1993
Agency Delegations and Designations	74	72	72
Designations Renewed	25	26	21
State Delegations at Export Port Locations	8	8	8
Registration Certificates Issued to Grain Firms	86	89	92
Licensees:			
Inspectors	680	681	650
Weighers	125	106	101
AMA Inspectors	87	88	86
Total Samplers/Technicians (approximate)	2,205	2,121	1,931
USGSA Samplers	1,500	1,460	1,438
AMA Samplers	705	652	493

International Relations

Monitoring Activities

In fiscal year 1993, FGIS issued the final report of a study on changes in shiplot soybean quality conducted by FGIS and the Japan Oilseed Processors' Association. The test cargo was monitored by FGIS and Japanese inspectors at both origin and destination ports. The study found that soybean foreign material increased between origin and destination by approximately 0.5 percent due to breakage through handling.

Complaints from Importers

In fiscal year 1993, FGIS received 48 quality and 2 quantity complaints from importers on grains inspected under the Act. The complaints involved 68 lots loaded aboard 61 vessels and 1 unit train.

Importers' complaints in fiscal year 1993 involved approximately 1.7 million metric tons, or about 1.6 percent by weight, of the total amount of grain exported during the year. The 19 quality complaints and 2 quantity complaints FGIS received in fiscal year 1992 represented approximately 1.0 percent of the total tonnage of grain exports.

The increase in complaints may be largely attributable to weather conditions that adversely affected the quality of portions of last year's grain crop.

Importers' Complaints 3-Year Summary

	Fiscal Year 1991	Fiscal Year 1992	Fiscal Year 1993
Quality Complaints	15	19	48
Quantity Complaints	2	2	2
Total	17	21	50
Export Volume Inspected (million metric tons)	94.8	103.0	106.7
Complaint Tonnage (million metric tons)	0.3	1.0	1.7
Complaint Percentage	0.3	1.0	1.6

Summaries of complaints from importers, briefings presented to visiting trade and government teams, and FGIS activities involving international travel during fiscal year 1993 appear on the following pages.

**Summary of Complaints
Reported by Importers
on Inspection and
Weighing
Fiscal Year 1993**

	Grain	Number of Complaints	Nature of Complaint
Africa			
Angola	Corn	1	Odor, broken corn and foreign material
Cote d'Ivoire	Corn	1	Moisture, damaged kernels, broken corn and foreign material
Kenya	Corn	1	Moisture, broken corn and foreign material
South Africa	Corn	1	Moisture, damaged kernels, heating
Zimbabwe	Corn	1	Broken corn and foreign material
Asia			
India	Wheat	1	Infestation, protein, dockage
Indonesia	Soybeans	1	Foreign material, damaged kernels, splits
	Wheat	1	Protein, dockage, total defects, foreign material
Japan	Wheat	1	Protein
	Wheat	1	Presence of iron fragments
Korea	Wheat	1	Wheat of other classes, contrasting classes
	Wheat	2	Presence of pesticide residues
	Corn	1	Broken corn and foreign material
Malaysia	Wheat	1	Protein
People's Republic of China	Wheat	1	Damaged kernels, defects, Falling Number
	Soybeans	1	Foreign material
Taiwan	Corn	1	Moisture, infestation
Thailand	Wheat	2	Protein
Europe			
Canary Islands	Corn	1	Broken corn and foreign material
Estonia	Wheat	1	Infestation, presence of rust, protein, moisture
	Corn	1	Moisture, broken corn and foreign material
Latvia	Wheat	1	Infestation
Lithuania	Corn	1	Heat-damaged kernels, damaged kernels, broken corn and foreign material
Macedonia	Wheat	1	Infestation, presence of weed seeds, damaged kernels
Poland	Wheat	1	Infestation

Summary of Complaints
Reported by Importers
on Inspection and
Weighing, continued
Fiscal Year 1993

	Grain	Number of Complaints	Nature of Complaint
Republic of Georgia	Wheat	1	Oil residue, infestation, animal filth
Spain	Corn	1	Moisture, broken corn and foreign material
Latin America			
Bolivia	Wheat	1	General quality
Chile	Corn	1	Broken corn and foreign material
	Wheat	1	Infestation, general quality
Colombia	Wheat	2	Dockage
	Wheat	1	Weight
Ecuador	Wheat	1	Protein, moisture, dockage, defects
	Corn	1	Broken corn and foreign material
Guatemala	Wheat	1	Falling Number, protein
Guyana	Wheat	1	Moisture, protein
Peru	Corn	1	Heat-damaged kernels, damaged kernels, broken corn and foreign material
Venezuela	Wheat	1	Falling Number, protein
	Corn	1	Damaged kernels, broken corn and foreign material
	Corn	1	Heat-damaged kernels, damaged kernels, broken corn and foreign material
Near East			
Egypt	Corn	1	Broken corn and foreign material
	Corn	1	Mold, moisture, damaged kernels, fungus
Jordan	Corn	1	Broken corn and foreign material
Kuwait	Wheat	1	Weight
Saudi Arabia	Corn	1	Moisture, broken corn and foreign material
	Corn	1	Damaged kernels, broken corn and foreign material
North America			
Canada	Corn	1	Heat-damaged kernels
TOTAL		50	

**Summary of Briefings
with Visiting Trade and
Governmental Teams,
Fiscal Year 1993**

	Number of Teams
Africa	
Ghana	1
Kenya	2
Morocco	1
South Africa	3
Sub-Saharan Africa	1
Tunisia	1
Asia	
India	2
Indonesia	2
Japan	5
Korea	2
People's Republic of China	4
Taiwan	1
Europe	
Albania	1
Bulgaria	1
Commonwealth of Independent States	3
Cyprus	1
Finland	1
France	1
Kazakhstan	1
Poland	4
Romania	1
Slovenia	1
Turkey	1
United Kingdom	1
Latin America & Caribbean	
Argentina	1
Brazil	1
Ecuador	1
Jamaica	1
Venezuela	1
Near East	
Egypt	2
Jordan	1
Kuwait	1
Yemen	1
TOTAL	52

**Summary of Activities
Involving International
Travel, Fiscal Year 1993**

Purpose	Number	Country Visited	Dates
1. To set up an inspection laboratory and to train local inspectors on grain inspection procedures at the request of U.S. Feed Grains Council.	1	Egypt	10/08 - 10/24/92
2. To represent USDA at opening ceremonies for the grain inspection laboratories established through the cooperation of U.S. Feed Grains Council, the Egyptian Central Laboratory for Food and Feed, and FGIS.	1	Egypt	10/19 - 10/23/92
3. To discuss the quality of corn shipments at the request of the South African Maize Board.	1	South Africa	10/23 - 11/03/92
4. To attend the North American Export Grain Association/Exportkhleb Grain Marketing Conference. To participate in U.S. Wheat Associates Multi-Country Crop Quality Seminars.	1	Russia, Poland	11/13 - 11/24/92
5. To train State of Washington grain inspectors in Canada.	1	Canada	11/15 - 11/21/92
6. To address corn quality discrepancies at the request of North American Export Grain Association.	1	South Africa	11/19 - 11/25/92
7. To participate in the Sub-Saharan Africa Grain Marketing Conference sponsored by U.S. Wheat Associates.	1	South Africa	2/12 - 2/23/93
8. To conduct training on FGIS quality inspection procedures and to meet with wheat and soybean importers to discuss quality concerns.	2	Thailand, Malaysia, Indonesia	3/21 - 4/10/93
9. To participate in a seminar for wheat importers at the request of U.S. Wheat Associates.	1	Bolivia	3/24 - 3/28/93

**Summary of Activities
Involving International
Travel, Fiscal Year 1993,
continued**

Purpose	Number	Country Visited	Dates
10. To participate in a wheat marketing conference at the request of U.S. Wheat Associates and to discuss corn quality issues with importers and corn wet millers.	1	Morocco, Tunisia	5/11 - 5/19/93
11. To provide technical support to the U.S. Embassy and the Jordanian government on a corn quality discrepancy at the request of the supplier.	1	Jordan	5/20 - 5/26/93
12. To meet with flour mill representatives to discuss grain quality and food safety issues in Japan and Korea at the request of U.S. Wheat Associates.	1	Japan, Korea	5/22 - 5/29/93
13. To participate in the second U.S./Canada Farm Leaders Grain Industry Program.	1	Canada	6/06 - 6/10/93
14. To address a rice quality discrepancy at the request of the Foreign Agricultural Service.	1	Russia	6/20 - 6/26/93
15. To participate in the Codex Alimentarius Commission meetings.	1	Switzerland	6/29 - 7/08/93
16. To attend the Grain Vision '93 Conference sponsored by the Canadian International Grains Institute.	1	Canada	7/27 - 7/29-93
17. To meet with Mexican agricultural officials to discuss aflatoxin testing of U.S. corn exports.	1	Mexico	7/29 - 7/31/93
18. To continue discussions with Mexican agricultural officials on aflatoxin testing of U.S. corn exports.	1	Mexico	8/18 - 8/20/93
19. To discuss inspection and weighing issues of mutual interest with the Canadian Grain Commission.	1	Canada	9/13 - 9/15/93

Grain Dust Explosion Data

FGIS receives information on grain dust explosions 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.

Summary of Reported Grain Dust Explosions, Fiscal Year 1993

Facility	Location	Date	Injuries	Fatalities
ADM Corn Sweeteners Plant	Cedar Rapids, IA	03/21/93	0	0
Zumbro/IFP, Inc.	Owatonna, MN	05/17/93	1	1
Circle S Feed	Pipestone, MN	07/10/93	0	0
Bunge Elevator	Vicksburg, MS	09/01/93	3	0

	1991	1992	1993
Number of Explosions	16	7	4
Number of Injuries	9	6	4
Number of Deaths	1	1	1

Budget Information

Status of Fee-Supported Accounts
Fiscal Year 1993

Program	Revenue 9/30/93	Obligations 9/30/93	Profit/(Loss) 9/30/93	Unobligated Funds 9/30/93
U.S. Grain Standards Act				
Inspection and Weighing	\$23,193	\$21,632	\$1,561	\$2,832
Canadian Operations	518	363	155	(457)
Official Agencies	1,580	1,806	(227)	4,363
Registration	17	7	10	49
USGSA Subtotal	25,308	23,808	1,499	6,787
Agricultural Marketing Act of 1946				
Rice Inspection	3,759	3,848	(89)	(580)
Commodity Inspection	4,232	5,418	(1,185)	3,675
AMA Subtotal	7,991	9,266	(1,274)	3,095
FGIS Total Fiscal Year 1993	33,299	33,074	225	9,882

Dollars in Thousands

11/2/93

**Accounting History of FGIS
Appropriated and Fee Supported Funds**

Description	FY 1985 Actual	FY 1986 Actual	FY 1987 Actual	FY 1988 Actual	FY 1989 Actual	FY 1990 Actual	FY 1991 Actual	FY 1992 Actual	FY 1993 Actual
Appropriated Funds									
Budget Authority	6,994	6,702	6,826	7,020	8,115	8,185	9,706	11,397	11,397
Total Obligations	6,676	6,396	6,694	6,806	7,496	8,017	9,527	11,232	10,676
Difference	318	306	132	214	619	168	179	165	721
Fee Supported Funds									
Fund Limitation	36,856	36,856	36,856	36,856	36,856	36,856	37,164	40,176	42,784
Total Obligations	31,467	29,558	29,517	31,094	34,795	33,943	30,456	29,249	33,074
Total Revenue	31,731	27,506	32,382	34,538	34,472	30,670	29,098	28,960	33,299
Profit/(Loss)	264	(2,052)	2,865	3,444	(323)	(3,273)	(1,358)	(289)	225
Total Obligations	38,143	35,954	36,211	37,900	42,291	41,960	39,983	40,481	43,750
Total Ceiling	43,850	43,558	43,682	43,876	44,971	45,041	46,870	51,573	54,181

Dollars in Thousands

11/2/93

FGIS Expenditures Supported by Users' Fees and Appropriations

