

## CHAPTER 12

# Marketing and Regulatory Programs



### Agricultural Marketing Service

When you visit the grocery store, you know you'll find an abundance and variety of top-quality produce, meats, and dairy products. If you're like most people, you probably don't give a second thought to the marketing system that brings that food from the farm to your table. Yet, this state-of-the-art marketing system makes it possible to pick and choose from a variety of products, available all year around, tailored to meet the demands of today's lifestyles. Millions of people—from grower to retailer—make this marketing system work. Buyers, traders, scientists, factory workers, transportation experts, wholesalers, distributors, retailers, advertising firms—in addition to the Nation's farmers—all help create a marketing system that is unsurpassed by any in the world. And USDA's Agricultural Marketing Service (AMS) helps make sure the U.S. marketing system remains world-class.

#### Services to Promote Quality: Grading, Quality Standards, and Certification

Wherever or whenever you shop, you expect good, uniform quality and reasonable prices for the food you purchase. AMS quality grade standards, grading, certification, auditing, inspection, and laboratory analysis are voluntary tools that industry can use to help promote and communicate quality and wholesomeness to consumers. Industry pays for these services and since they are voluntary, their widespread use by industry indicates they are valuable tools in helping market their products.

In the grocery store, USDA quality grade marks are usually seen on beef, lamb, veal, chicken, turkey, butter, and eggs. For many other products, such as fresh and processed fruits and vegetables, the grade mark isn't always visible on the retail product. For these commodities, the grading service is used by wholesalers, and the final retail packaging may not include the grade mark. However, quality grades are widely used—even if they are not prominently displayed—as a “language” among traders.

Grading is based on standards, and standards are based on measurable attributes that describe the value and utility of the product. Beef quality standards, for instance, are based on attributes such as marbling (the amount of fat interspersed with lean meat), color, firmness, texture, and age of the animal, for each grade. In turn, these factors are a good indication of tenderness, juiciness, and flavor of the meat—all characteristics important to consumers. Prime, Choice, and Select are all grades familiar to consumers of beef.

Standards for each product describe the entire range of quality for a product, and the number of grades varies by commodity. There are eight grades for beef, and three each for chickens, eggs, and turkeys. On the other hand, there are 45 grades for cotton, 32 grade standards and specifications for dairy products, and more than 312 fruit, vegetable, and specialty product standards.

The food testing side of the AMS program has six user-funded laboratories performing numerous microbiological, chemical, and physical analyses on a host of food and fiber commodities, including processed dairy products, meat, poultry, egg products, and fruits and vegetables. This testing supports AMS purchases for the National School Lunch Program and other domestic feeding programs, troop ration specifications for the Department of Defense, export of U.S. food to foreign countries, laboratory quality control and assurance programs, and testing for aflatoxin in peanut products.

AMS has developed quality assurance (QA) services that include Hazard Analysis Critical Control Point (HACCP) and International Organization for Standardization (ISO)-based programs. These programs ensure and document that companies' operations are in compliance with provisions of contracts and/or their own standards and procedures. QA services are voluntary, hourly-fee-based, and value-added. HACCP concepts and procedures have been recommended by the National Academy of Sciences for application in the food industry, and ISO procedures

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*U.S. agriculture successfully delivers abundant, affordable, safe, and nutritious food to markets worldwide. Nothing has been more important to this success than an extensive physical and institutional infrastructure—in effect, the backbone of the food and agricultural system.*

are becoming an international norm for some processes.

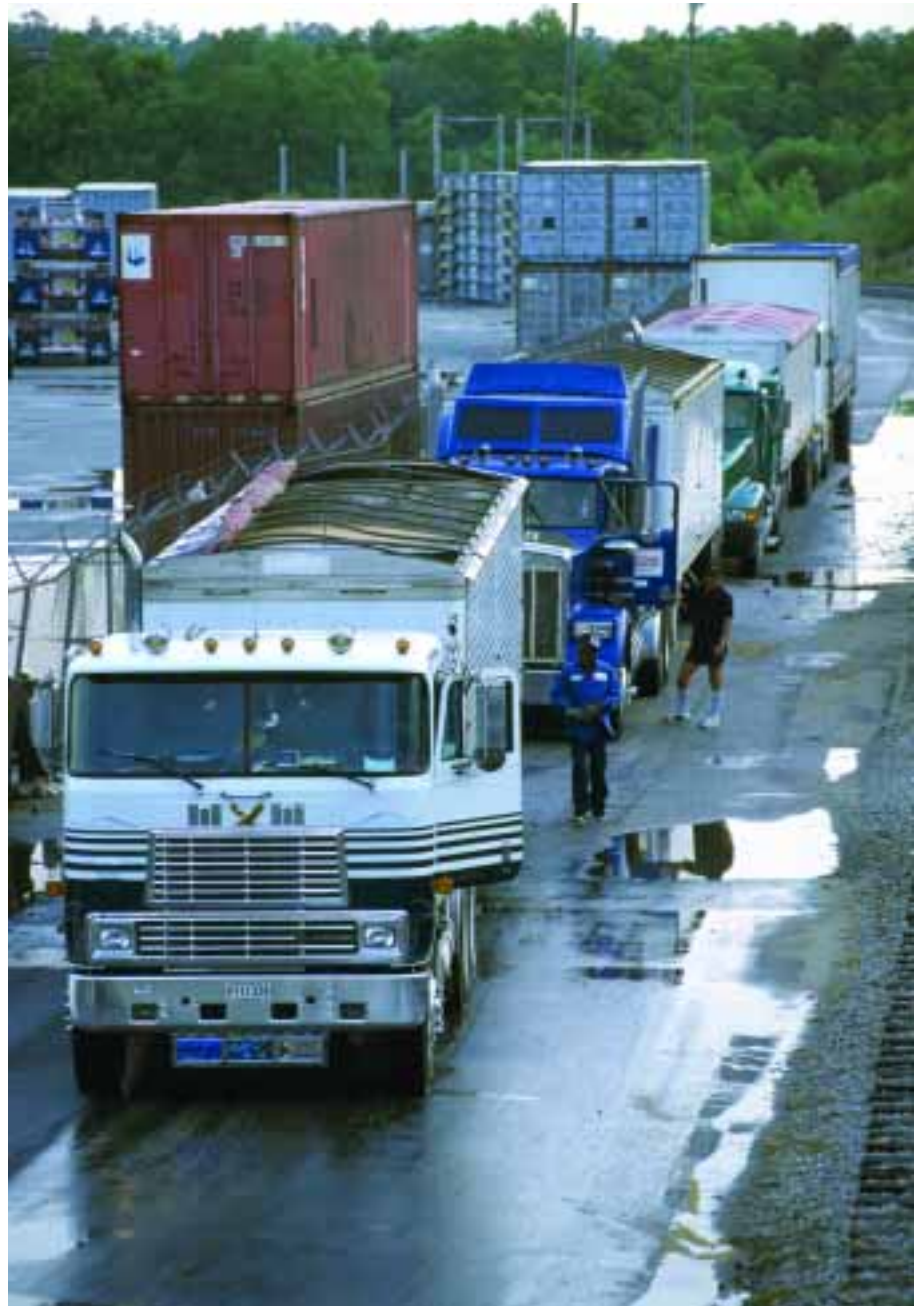
One such service AMS has developed is the Process Verification Program, which provides livestock and meat producers, along with other businesses in the agricultural industry, an opportunity to assure customers of their ability to provide consistent quality products by having their written manufacturing processes confirmed through independent, third-party audits. AMS Process Verified suppliers are able to have marketing claims, such as breed, feeding practices, or other raising claims verified by the USDA and marketed as “USDA Process Verified.”

AMS’ Dairy Programs conducts comprehensive evaluations of dairy and related products, manufacturing plant facilities, and equipment to assure their eligibility to receive grading service and display the grade shield on products. Associated with this service is a sanitary design evaluation service for processing equipment. Under this service, processors can have the sanitary aspects of the design and the cleanability of a machine or process evaluated prior to installation in their facility. A similar service is also offered by AMS for the meat and poultry industry.

### Spreading the News

Farmers, shippers, wholesalers, and retailers across the country rely on AMS Market News for up-to-the-minute information on commodity prices and shipments. Market News helps industry make the daily critical decisions about where and when to sell, and what price to expect. Because this information is made so widely available, farmers and those who market agricultural products are better able to compete, ensuring consumers a stable and reasonably priced food supply.

In 2001, AMS launched the Livestock Mandatory Price Reporting (LMPR) program as required by the Livestock Mandatory Price Reporting Act of 1999. As a leading example of electronic government in USDA, the LMPR program requires packers to electronically submit purchase and sale information to AMS.



The resulting data, reported by AMS, supplies the agricultural industry with multiple daily and weekly reports covering new transaction data for slaughter cattle, swine, lamb, beef and lamb meat.

Overall, AMS Market News reporters generate approximately 700 reports each day, collected from more than 100 U.S. locations. Reports cover local, regional, national, and international markets for dairy, livestock, meat, poultry, eggs, grain, fruit, vegetables, tobacco, cotton, and specialty products. Weekly, biweekly, monthly, and annual reports track the



longer range performance of cotton, dairy products, poultry and eggs, fruits, vegetables, specialty crops, livestock, meat, grain, floral products, feeds, wool, and tobacco. Periodically, AMS issues special reports on such commodities as olive oil, pecans, peanuts, and honey.

### **Buying Food: Helping Farmers, School Children, and Needy Persons**

AMS serves both farmers and those in need of nutrition assistance through its commodity procurement programs. By purchasing wholesome, high-quality food products that are in abundance, AMS helps provide stable markets for producers. The Nation's food assistance programs benefit from these purchases, because these foods go to low-income individuals who might otherwise be unable to afford them.

Some of the programs and groups that typically receive USDA-purchased food include: children in the National School Lunch, Summer Camp, and School Breakfast Programs; Native Americans participating in the Food Distribution Program on Indian Reservations; older Americans through the Nutrition Program for the Elderly; and low-income and homeless persons through the Commodity Supplemental Food Program and the Emergency Food Assistance Program. In addition, USDA helps provide disaster relief by making emergency purchases of commodities for distribution to disaster victims.

### **Pesticides: Information and Records**

The U.S. food supply is one of the safest in the world, but the public is still concerned about the effects of agricultural pesticides on human health and environmental quality. The Pesticide Data Program (PDP), which is administered by AMS, provides statistically reliable information on chemical residues found on agricultural commodities such as fresh and processed fruits and vegetables, grain, and milk. PDP is a Federal-State partnership where 10 participating States using uniform procedures collect and test these commodities. The information gained helps form the basis for conducting realistic dietary risk assessments and evaluating pesticide tolerances as required by the Food Quality Protection Act of 1996. The Environmental Protection Agency uses PDP data to address reregistration of pesticides.

### Helping Farmers Promote Their Products

“The Touch...the Feel of Cotton...the Fabric of Our Lives,” “Beef...It’s What’s for Dinner,” “Got Milk?,” “If It Ain’t Eggs, It Ain’t Breakfast.” If you’ve watched television or read magazines lately, you’ve probably heard or read these slogans and others for a host of agricultural commodities. All of these promotional campaigns are part of the Research and Promotion Programs that AMS oversees.

Federal research and promotion programs, authorized by Federal legislation, are designed to strengthen the industry’s position in the marketplace and to maintain and expand domestic and foreign markets. The programs are all fully funded by industry assessments. Board members are nominated by industry and appointed officially by the Secretary of Agriculture. AMS oversees the activities of the boards or councils and approves budgets, in order to assure compliance with the legislation.

Currently, there are research and promotion programs for beef, lamb, pork, cotton, fluid milk, dairy products, eggs, honey, mushrooms, potatoes, soybeans, watermelons, popcorn, peanuts, and cultivated blueberries.

But, while advertising is one part of these programs, product research and development is also a major focus. Wrinkle-resistant cotton and low-fat dairy products are just two examples of how these programs have benefited consumers and expanded markets for producers.

### Marketing Orders: Solving Producers’ Marketing Problems

Marketing agreements and orders help dairy, fruit, and vegetable producers come together to work at solving marketing problems they cannot solve individually. Marketing orders are flexible tools that can be tailored to the needs of local market conditions for producing and selling. But, they are also legal instruments that have the force of law, with USDA ensuring an appropriate balance between the interests of producers looking for a fair price and consumers

who expect an adequate, quality supply at a reasonable price.

Federal milk marketing orders, for example, establish minimum prices that milk handlers or dealers must pay to producers for milk, depending on how that milk is used—whether fluid milk, ice cream, cheese, or other storable product. Federal milk orders help build more stable marketing conditions by operating at the first level of trade, where milk leaves the farm and enters the marketing system. They are flexible in order to cope with market changes. They assure that consumers will have a steady supply of fresh milk at all times.

Marketing agreements and orders also help provide stable markets for fruit, vegetable, and specialty crops like nuts and raisins, to the benefit of producers and consumers. They help farmers produce for a market, rather than having to market whatever happens to be produced. A marketing order may help an industry smooth the flow of crops moving to market, to alleviate seasonal shortages and gluts. In addition, marketing orders help maintain the quality of produce being marketed; standardize packages or containers; and authorize advertising, research, and market development. Each program is tailored to the individual industry’s marketing needs.

### Ensuring Fair Trade in the Market

AMS also administers several programs that ensure fair trade practices among buyers and sellers of agricultural products.

The Perishable Agricultural Commodities Act (PACA) program promotes fair trading in the fresh and frozen fruit and vegetable industry. Through PACA, buyers and sellers are required to live up to the terms of their contracts, and procedures are available for resolving disputes outside the civil court system.

Fruit and vegetable buyers and sellers need this assurance because of the highly perishable nature of their products. Trading in produce is considerably different than trading for a car, a computer, or even grain. When a vegetable grower

doesn’t get paid, the product usually can’t be reclaimed before it spoils—or before it has already been consumed.

The Federal Seed Act (FSA) protects everyone who buys seed by prohibiting false labeling and advertising of seed in interstate commerce. The FSA also complements State seed laws by prohibiting the shipment of seed containing excessive noxious weed seeds. Labels for agricultural seed must state such information as the kinds and percentage of seed in the container, percentages of foreign matter and weed seeds, germination percentage and the date tested, and the name and address of the shipper. USDA also tests seed for seedsmen and seed buyers on a fee-for-service basis to determine quality.

The Plant Variety Protection Act provides intellectual property rights protection to breeders of plants that reproduce both sexually, that is, through seeds, and through tubers. Developers of new plant varieties can apply for certificates of protection. This protection enables the breeder to market the variety exclusively for 20 years and, in so doing, creates an incentive for investment in the development of new plant varieties. Since 1970, AMS’ Plant Variety Protection Office has issued more than 5,000 certificates of protection.

The Agricultural Fair Practices Act allows farmers to file complaints with USDA if a processor refuses to deal with them because they are members of a producers’ bargaining or marketing association. The Act makes it unlawful for handlers to coerce, intimidate, or discriminate against producers because they belong to such groups. USDA helps to institute court proceedings when farmers’ rights are found to be so violated.

The Shell Egg Surveillance Program protects consumers and producers from those who would pack eggs for consumers with more low-quality shell eggs, such as dirty, cracked, and leaking eggs, than permitted by U.S. Consumer Grade B standards. Producers that would do so, intentionally or otherwise, are able to gain a financial advantage over other



producers who do not. When mixed in with high-quality eggs, these low-quality eggs can be sold at a higher price, instead of being diverted for production of liquid and frozen egg products. Also consumers suffer by receiving lower quality eggs at high-quality prices.

### Organic Certification

AMS is responsible for implementing and overseeing the organic certification program. The final rule containing national standards for production, handling, and labeling of organic agricultural products was published in December 2000.

The final rule went into effect October 2002. Consumers can now be assured that all organic food sold in the United States meets the same high standards and the new labels will help them to know the organic content of the food they buy.

Consumers should also look for the USDA Organic Seal, which may appear on all food, processed or raw, that is at least 95 percent organic.



### Direct Marketing and Market Development

AMS continually seeks ways to help farmers and marketers improve the U.S. food marketing system. For example, AMS' Federal-State Marketing Improvement Program (FSMIP) provides matching funds on a competitive basis to State Departments of Agriculture or other State agencies to conduct studies or develop innovative approaches to the marketing of agricultural products. The aim of the program is to improve the marketing system or identify new market opportunities for producers, ultimately benefitting consumers through lower food costs and more food choices. Pro-

jects include research on innovative marketing techniques, taking those research findings into the marketplace to "test market" the results, and developing State expertise in providing service to marketers of agricultural products. In FY 2001, the FSMIP funded 34 projects in 25 States for nearly \$1.35 million.

### Efficient Transportation for Agriculture

An efficient transportation system allows consumers access to a wide variety of agricultural products and commodities produced beyond their own localities.

AMS, through its Transportation and Marketing Programs, conducts research and issues periodic reports on the logistical requirements and constraints involved in transporting and distributing U.S. agricultural products to destination markets by railroads, trucks, inland barges, and ocean vessels, and monitors the adequacy of existing infrastructure to support efficient commerce. The research reports provided by AMS transportation and marketing specialists are designed to help agricultural growers, processors, shippers, and exporters respond more effectively to emerging changes in both the domestic and international marketplace and are specifically targeted to help the smaller grower, processor, shipper, or exporter who may lack easy access to relevant market data and research. AMS also provides funding to academic institutions and nonprofit organizations for the purpose of investigating alternative marketing channels for agricultural items produced by limited-resource farmers and processors.

### Produce Locally, Think Globally

Agricultural product markets are increasingly international in scope, and AMS is a strong partner in enhancing the competitiveness of American agriculture. AMS' roles include quality grading and certification for export marketings, reporting international market news, and participation in trade-oriented international forums that develop international agricultural product standards.

Grading involves determining whether a product meets a set of quality standards. Certification ensures that contract speci-

fications have been met—in other words, that the buyer receives the product in the condition and quantity described by the terms of the contract. AMS commodity graders frequently support other USDA agencies involved in export assistance, including the Farm Service Agency and the Foreign Agricultural Service.

U.S. companies often request certification services when exporting to a country that has specific import requirements. Certification services provided by AMS help avoid rejection of shipments or delay in delivery once the product reaches its foreign destination. Delays lead to product deterioration, shipper losses, and, ultimately, affect the image of U.S. quality. AMS' Quality Systems Verification Program, a user-funded service for the meat industry, provides independent, third-party verification of a supplier's documented quality management system. The program was developed to promote world-class quality and to improve the international competitiveness of U.S. livestock and meat. AMS also certifies that all dairy products exported to the European Union (EU) meet the requirements of a trade agreement between the United States and the EU.

AMS provides laboratory testing for exporters of U.S. food commodities on a fee basis in keeping with sanitary and phytosanitary requirements of foreign countries. To date, this service has been requested by exporters of products destined for Japan, South Korea, and other Pacific Rim countries, South Africa, European Union member countries, and countries of the former Soviet Union. AMS also provides a seed testing service used by U.S. seed exporters. Seed analysis certificates containing test results have been issued for seed exported to more than 50 countries.

For selected fruits, vegetables, nuts (including peanuts), and specialty crops, the grading of imports is mandatory. For the most part, however, firms importing agricultural products into the United States use grading services voluntarily. AMS graders are also often asked to demonstrate commodity quality to foreign firms and governments.



In addition to export grading and certification services, AMS Market News offices provide information on sales and prices of both imports and exports. Today, U.S. market participants can receive market information on livestock and meat from Venezuela, New Zealand, Japan, Poland, and other Pacific Rim markets, Mexico, Canada, Australia, and New Zealand; poultry from Canada, Mexico, Japan, Germany, and the Netherlands; fruits, vegetables, and ornamentals from Argentina, Bulgaria, France, Canada, Chile,

Columbia, the Caribbean Basin, Germany, Great Britain, Japan, Mexico, The Netherlands, Poland, South Africa, and Spain; dairy products from Eastern and Western Europe and Oceania; and a host of products from Ukraine, Kazakhstan, and Russia.

#### FOR MORE INFORMATION

Additional information is available at <http://www.ams.usda.gov>

### **Animal and Plant Health Inspection Service: Protecting Agricultural Health and Productivity**

Why are the farmers and ranchers of the United States able to produce so much food for the tables of America's consumers?

Of course, there's no simple answer. But one key to this plentiful supply of food can be summed up in a single phrase: "Healthy crops and livestock."

And this is no accident. America's agricultural health is a result of a team effort—good husbandry by farmers and ranchers plus an organized effort to exclude foreign pests and diseases and control and eradicate those agricultural threats that make their way past our defenses.

If agriculture is the foundation of manufacture and commerce, there is perhaps no greater mission than making sure that foundation remains healthy and strong. With the advent of free trade initiatives, a global network of countries has agreed that valid agricultural health concerns—not politics nor economics—are the only acceptable basis for trade restrictions. In this environment, our country's agricultural health infrastructure will be our farmers' greatest ally in seeking new export markets.

#### **Safeguarding U.S. Agriculture**

Agriculture, America's biggest industry and its largest employer, is under constant threat of attack by invasive species. Invasive species are countless and often microscopic, and they gain access to our country in surprising ways. Their potential allies are every traveler entering the United States and every American business importing agricultural products from other countries.

Invasive species are nonindigenous organisms that cause, or are likely to cause, harm to the economy, the environment, plant and animal health, or public health if introduced into the country. Organisms considered to be invasive species can include terrestrial or aquatic plants, animals, and disease

agents. The estimated economic harm to the United States from these biological invaders runs in the tens of billions of dollars and may exceed \$120 billion annually.

Problems associated with invasive species are national in scope and are becoming more and more widespread. For instance, conservation experts estimate that an average of 3 million acres of land throughout the United States are lost to invasive plants each year.

While the United States faces an ever-increasing challenge in managing invasive species that are currently thriving across our Nation, preventing the introduction of new invasive species also has become more challenging in today's global environment. Worldwide opportunities for international commerce and travel have reached unprecedented levels. Unfortunately, this global activity has increased greatly the number of pathways for the movement and introduction of foreign, invasive agricultural pests and diseases.

The Animal and Plant Health Inspection Service (APHIS) historically has worked hard to safeguard American agricultural resources and prevent damage to our natural ecosystems from the introduction and establishment of those invasive species that threaten the health and vitality of domestic plants and animals.

Over the last several years, APHIS has refined and modernized its agricultural safeguarding system, especially at U.S. border crossings and other international ports of entry. This system is a combination of regulatory, inspection, and anti-smuggling programs designed to keep plant and animal products that could carry pests or diseases out of the United States. Since the outbreak of foot-and-mouth disease in Great Britain in 2001, APHIS has hired additional inspection personnel at major U.S. ports of entry and ensured heightened vigilance against this disease and other serious pest and disease risks to U.S. agriculture.

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*Science, technology, and intergovernmental cooperation are key to keeping crop and animal pests and diseases out of the United States, and to managing the pest and disease challenges we face inside our borders...*

*Invasive crop insects, weeds, and diseases are particularly elusive in this age of extensive international trade.*



APHIS has also further intensified agency biosecurity efforts as a result of the events of September 11, 2001. In combination with earlier efforts to bolster the Nation's defenses against foot-and-mouth disease (FMD), APHIS, now more than ever, is confident in its ability to detect and respond to the accidental or intentional introduction of animal or plant pest and diseases. Below is a summary of the numerous short- and long-term measures APHIS has taken to strengthen its infrastructure and safeguarding programs.

- By the close of fiscal year (FY) 2003, APHIS intends to have increased its safeguarding personnel to approximately 3,870, a 50-percent increase over FY 2000 hiring levels.
- Starting in FY 2001, APHIS hired 18 additional veterinarians to its comprehensive agricultural quarantine inspection program to strengthen the United States' agriculture infrastructure.
- The early detection of smuggled agricultural products that may contain foreign pests or diseases is also extremely important. In order to ensure this detection takes place and pathways are immediately shutdown, APHIS created the Smuggling Interdiction and Trade Compliance unit. APHIS employs 92 Smuggling Interdiction and Trade Compliance officers and supervisors. This unit conducts approximately 20 blitzes, or intensified inspections, at U.S. ports of entry each year.
- To formalize a method for activating private veterinarians across the country to assist with a foreign animal disease outbreak, APHIS has created a National Animal Health Reserve Corps. This organization is currently made up of more than 275 private veterinarians from around the United States who would become temporary Federal employees to assist APHIS veterinarians in field and laboratory operations during a foreign animal disease situation.
- In late September 2001, APHIS provided nearly \$2 million to 32 States to bolster emergency animal disease prevention,

preparedness, response, and recovery systems. Funding provided will be used for training, purchasing equipment, and conducting exercises to simulate animal health emergencies.

Two key pieces of legislation recently passed into law have also augmented APHIS' authority—and ability—to safeguard U.S. agriculture. The Plant Protection Act of 2000 and the Animal Health Protection Act of 2002 provide greater protection for our Nation's agricultural commodities.

The Plant Protection Act gives APHIS new tools for enforcing the plant quarantine laws by establishing more effective deterrents against smuggling. Agency officials can now assess larger fines, secure subpoenas, and prosecute serious offenders in Federal Court. In addition, an amendment to the Plant Protection Act under the 2002 Farm Bill provides for a felony provision, which increases criminal penalties from misdemeanors to felonies if an individual knowingly imports, enters, exports, or moves for distribution or sale in violation of the Act.

Congress passed the Animal Health Protection Act as part of the 2002 Farm Bill. The Act consolidates more than 20 animal quarantine and related laws. In addition, it increases APHIS' authority to deter people from deliberately bringing into the United States prohibited animals, animal products, and even animal disease agents. The maximum fines for deliberate violations of APHIS' import regulations have increased from \$1,000 per violation to \$50,000 per violation for individuals and up to \$500,000 for companies.

In addition to its safeguarding mission, APHIS also helps facilitate trade by ensuring that both U.S. agricultural products exported throughout the world and foreign agricultural imports are free of plant and animal pests and diseases. In fiscal year 2000, APHIS helped to resolve 67 foreign trade disputes that centered around plant and animal health issues. These efforts, in turn, permitted trade to occur worth over \$2.5 billion to U.S. farmers and producers.

## The Components of APHIS' Safeguarding System

### *Agricultural Quarantine Inspection*

Many passengers entering the United States do not realize that one piece of fruit packed in a suitcase has the potential to cause millions of dollars in damage to U.S. agriculture. Forbidden fruits and vegetables can carry a whole range of invasive plant diseases and pests. Oranges, for example, can introduce diseases like citrus canker or pests like the Mediterranean fruit fly.

Similarly, sausages and other meat products from many countries can contain animal disease organisms that can live for many months and even survive processing. Meat scraps from abroad could end up in garbage that is fed to swine. If the meat came from animals infected with a disease, such as African swine fever or hog cholera, it could easily be passed to domestic swine, and a serious epidemic could result. An outbreak of African swine fever in U.S. hogs would drive up the price of pork to consumers, cost hundreds of millions of dollars to eradicate, and close many U.S. export markets.

APHIS safeguards U.S. borders against the entry of foreign agricultural pests and diseases. At 187 U.S. ports of entry, about 3,300 Plant Protection and Quarantine (PPQ) employees inspect international conveyances and the baggage of passengers for plant and animal products that could harbor pests or disease organisms. At some of these international ports, detector dogs in APHIS' Beagle Brigade help find prohibited agricultural materials. PPQ officers also inspect ship and air cargoes, rail and truck freight, and package mail from foreign countries. At animal import centers, APHIS veterinarians check animals in quarantine to make sure they are not infected with any foreign pests or diseases before being allowed into the country.

In fiscal year 2001, APHIS officials inspected about 52,000 maritime vessels, 540,000 aircraft, 85,000,000 airplane and cruise ship passengers, 2,200,000 cargo shipments, and 454,000 rail cars for prohibited or infested agricultural products that could threaten the health of U.S. agriculture. APHIS officials intercepted and impounded prohibited materials over 1.7 million times while carrying out inspection duties. APHIS also issued approximately 16,000 civil penalties to international travelers in baggage areas at U.S. airports for failing to declare prohibited agricultural products from abroad. In confiscating these prohibited products, APHIS detected an estimated 71,000 pests that could have seriously damaged America's agricultural and natural resources, if left unchecked.

#### *International Programs*

Through direct overseas contacts, International Services (IS) employees gather and exchange information on plant and animal health; work to strengthen national, regional, and international agricultural health organizations; and cooperate in international programs against certain pests and diseases that directly threaten American agriculture. Two of the latter are the MOSCAMED program—which combats Medfly infestations in Mexico and Guatemala—and a program to eradicate screwworms, a parasitic insect of warm-blooded animals.

Screwworms were eradicated from the United States through the use of the sterile insect technique. With this method, millions of screwworm flies are reared in captivity, sterilized, and then released over infested areas to mate with native fertile flies. Eggs produced through such matings do not hatch, and the insect literally breeds itself out of existence.

To provide further protection to U.S. livestock, starting in 1972, eradication efforts were moved southward from the U.S.-Mexican border, with the eventual goal of establishing a barrier of sterile flies across the Isthmus of Panama.

#### *Coping With Invasions*

If, despite our best efforts, foreign pests or diseases do manage to slip past our defenses, APHIS establishes appropriate quarantine and eradication programs. Current examples include: 1) citrus canker eradication in Florida; 2) plum pox eradication in Pennsylvania, and 3) Asian longhorned beetle eradication in metropolitan Chicago and New York City.

Early detection of exotic animal diseases by alert livestock producers and practicing veterinarians who contact specially trained State and Federal veterinarians is the key to the quick detection and elimination of a foreign animal disease of concern. More than 300 such trained veterinarians are located throughout the United States to investigate suspected foreign diseases. Within 24 hours of diagnosis, one of two specially trained task forces in VS can be mobilized at the site of an outbreak to implement the measures necessary to eradicate the disease.

Currently, APHIS officials are actively working to prevent the entry of bovine spongiform encephalopathy (BSE)—sometimes referred to as “mad cow disease.” BSE has never been diagnosed in the United States. Since 1989, APHIS has restricted the importation of live ruminants and ruminant products—including animal feed made with ruminant protein—from Great Britain and other countries where BSE is known to exist. In 1997, APHIS extended these restrictions to include all of the countries of Europe. As of December 2000, APHIS prohibited all imports of rendered animal protein products, regardless of species, from Europe. In addition, APHIS has conducted a BSE surveillance program since 1989. Specialists have examined brain specimens from more than 21,000 cattle and have found no evidence of BSE.

#### **Plant Health Safeguarding Review**

In an effort to evaluate and ultimately improve pest exclusion efforts, APHIS contracted with the National Plant Board several years ago to conduct a thorough review of all components of the agency's safeguarding system. The review group, which was comprised of State, industry, and university representatives, reviewed

APHIS' pest exclusion efforts, international pest information systems, pest permits, and detection and response efforts. After concluding its review, the group made approximately 300 recommendations that the group believes will assist APHIS in adapting its safeguarding efforts to better manage drastic increases in trade and international travel.

#### **Animal Health Safeguarding Review**

The National Association of State Departments of Agriculture concluded a review of APHIS' animal health safeguarding programs and published a report of the review's findings in October 2001. The review confirms that the United States has been successful in preventing, detecting, and eradicating animal diseases, and it outlines steps that APHIS can take to further strengthen domestic safeguarding systems.

The safeguarding review's recommendations focus on, among other things, APHIS' domestic and international disease monitoring programs; the critical nature of cooperative emergency response planning; and improvements to the agency's information collection and dissemination strategies.

#### *Import-Export Regulations*

APHIS is responsible for enforcing regulations governing the import and export of animals and plants and certain agricultural products.

Importation requirements depend on both the product and the region of origin. Certain restrictions, ranging from testing or processing to total import prohibition, are placed on both animals and animal products if they originate in countries that have a different disease status from the United States. Livestock and poultry must be accompanied by a health certificate issued by an official of the exporting country.

Imports of livestock and poultry from most countries must enter the United States through APHIS-approved quarantine facilities. Animals from Mexico and Canada may cross at land ports along the borders as long as they have met certain specified requirements and are accom-

panied by the appropriate paperwork. Personally owned pet birds of foreign origin can enter through one of four USDA-operated bird quarantine facilities: New York, NY; Miami, FL; San Ysidro, CA; and Hidalgo, TX.

Imported plants must be accompanied by a phytosanitary certificate issued by an official of the exporting country. APHIS maintains 16 plant inspection stations, the largest of which is in Miami, FL, for commercial importation of plant materials. Smaller stations are at Orlando, FL; San Juan, PR; John F. Kennedy International Airport, Jamaica, NY; Linden, NJ; Houston, El Paso, and Los Indios (Brownsville), TX; Nogales, AZ; San Diego, Los Angeles, and San Francisco, CA; Seattle, WA; Honolulu, HI; Beltsville, MD (used strictly for importations of plants for research purposes); and New Orleans, LA.

To facilitate agricultural exports, APHIS officials certify the health of both plants and animals that are shipped to foreign countries. APHIS PPQ provides assurance that U.S. plants and plant products meet the plant quarantine import requirements of foreign countries.

It is in the area of foreign animal health requirements that APHIS is of greatest help to the U.S. livestock industry. Through direct negotiations with foreign governments, APHIS has established approximately 450 livestock, semen, embryo, and poultry health agreements with more than 100 countries in the world. These negotiations are a continuous process wherever APHIS finds opportunities to open new markets and to reduce unnecessary impediments or changing disease conditions require adjustments.

### **Domestic Plant Health Programs**

In most cases, plant pest problems are handled by individual farmers, ranchers, and other property owners and their State or local governments. However, when an insect, weed, or disease poses a particularly serious threat to a major crop, the Nation's forests, or other plant resources, APHIS may join in the control work.

### *"Deliver Us From Weevil"—Boll Weevil Eradication*

One major domestic program PPQ is coordinating is the effort to eradicate boll weevils from the United States. The boll weevil entered this country from Mexico in the late 1890s and soon became a major pest of cotton. Boll weevil is estimated to cost U.S. farmers \$300 million in control costs and yield losses.

The current boll weevil eradication effort judiciously applies pesticides based on the number of adult weevils trapped around cotton fields. The traps contain a pheromone and a small amount of insecticide that kills all captured weevils. In eradication program areas, traps are placed at a rate of one trap per 1 to 3 acres and are checked weekly. Pesticide is applied only to fields that reach a predetermined number of trapped weevils. This selective use of pesticides results in fields requiring minimal pesticide applications—sometimes none—during the growing season. After several seasons, the weevils are eradicated within the defined program area, eliminating any further need to spray for this pest.

The National Boll Weevil Eradication Program is one-third complete with total eradication projected by the end of 2005 or beginning of 2006. Approximately 5.9 million acres of cotton spread over nine States are now weevil-free. These States include Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Kansas, Arizona, and California. Eradication efforts are underway on 9.7 million additional acres, which include nearly all other areas of the country affected by the boll weevil.

### *Asian Longhorned Beetle (ALB)*

Since 1996, infestations of the ALB, a destructive pest of hardwood in China, have been detected in and around New York City, and near Chicago, IL. APHIS began an ALB eradication program in conjunction with State and local officials in both areas in FY 1997. Since then, aggressive efforts to detect and eradicate this pest have drastically reduced ALB populations and helped protect forest resources across the United States.

The programwide implementation of the insecticide imidacloprid in Chicago and New York has increased confidence that ALB can be eradicated through an aggressive combination of chemical treatment, survey, quarantine, and tree removal. Imidacloprid is a systemic insecticide approved for the eradication of ALB and is found in many common lawn and garden pesticides and dog and cat flea control products. Each noninfested tree to be treated is inoculated via small capsules containing imidacloprid that is absorbed naturally through the tree's vascular system. The process takes approximately 4 hours per tree and can remain effective up to 1 year. Over 70,000 trees in New York City and 55,000 trees on Long Island were treated with imidacloprid in the spring of 2002.

### *Citrus Canker*

Citrus canker is a devastating bacterial disease that greatly reduces production in citrus trees by causing fruit and leaves to drop prematurely. It was first detected in residential trees in Florida's Dade County in 1995; since then, it has been detected in commercial and residential trees in five other counties: Manatee, Collier, Broward, Hendry, and Hillsborough. APHIS has worked with Florida officials to conduct a citrus canker eradication program since 1996. This program consists of a statewide survey of residential properties and commercial citrus groves, regulatory action, removal of infected and exposed trees within 1,900 feet of an infection site, where legally allowable, a commercial compliance program, statewide eradication activities, and an intensive inspection-based barrier program.

Since the citrus canker eradication program's inception, APHIS and the State of Florida have spent approximately \$300 million combating the disease. This figure excludes compensation funds provided to commercial citrus growers.

### Domestic Animal Health Programs

Protecting the health of the Nation's livestock and poultry industries is the responsibility of APHIS' Veterinary Services (VS).

VS veterinary medical officers and animal health technicians work with their State counterparts and with livestock producers to carry out cooperative programs to control and eradicate certain animal diseases. The decision to begin a nationwide campaign against a domestic animal disease is based on a number of factors, the most important of which is: "Are producers and the livestock industry a leading force in the campaign?"

To date, 13 serious livestock and poultry diseases have been eradicated from the United States. They are:

#### Diseases Eradicated from the United States

Year	Disease
1892	Contagious bovine pleuropneumonia
1929	Foot-and-mouth disease
1929	Fowl plague
1934	Glanders
1942	Dourine
1943	Texas cattle fever
1959	Vesicular exanthema
1959 & 1966	Screwworms (Southeast & Southwest)
1971	Venezuelan equine encephalitis
1973	Sheep scabies
1974	Exotic Newcastle disease
1978	Hog cholera
1985	Highly pathogenic avian influenza

Current VS disease eradication programs include cooperative State-Federal efforts directed at cattle and swine brucellosis, bovine tuberculosis, and pseudorabies in swine.

Disease control and eradication measures include quarantines to stop the movement of possibly infected or exposed animals, testing and examination to detect infection, destruction of infected (sometimes exposed) animals to prevent further disease spread, treatment to eliminate parasites, vaccination in some cases, and cleaning and disinfection of contaminated premises.

APHIS animal health programs are carried out by a field force of about 250 veterinarians and 360 inspectors working out of area offices. Laboratory support for these programs is supplied by APHIS' National Veterinary Services Laboratories (NVSL) at Ames, IA, and Plum Island, NY, which are centers of excellence in the diagnostic sciences and an integral part of APHIS' animal health programs.

Under the Virus-Serum-Toxin Act of 1913, APHIS enforces regulations to assure that animal vaccines and other veterinary biologics are safe, pure, potent, and effective. Veterinary biologics are products designed to diagnose, prevent, or treat animal diseases. They are used to protect or diagnose disease in a variety of domestic animals, including farm animals, household pets, poultry, fish, and fur bearers.

APHIS also regulates the licensing and production of genetically engineered vaccines and other veterinary biologics. These products range from diagnostic kits for feline leukemia virus to genetically engineered vaccines to prevent pseudorabies, a serious disease affecting swine. Since the first vaccine was licensed in 1979, a total of 79 genetically engineered biologics have been licensed; all but 20 are still being produced.

### Monitoring Plant and Animal Pests and Diseases

In order to combat invasive plant pests and animal diseases, it is important to know their number and where they are located. To monitor plant pests, APHIS PPQ works with the States in a project called the Cooperative Agricultural Pest Survey. Survey data on invasive species such as weeds, insects, and plant diseases and pests are entered into a nationwide database, the National Agricultural Pest Information System (NAPIS).

By accessing NAPIS, users can retrieve the latest data on pests. NAPIS data can assist pest forecasting, early pest warning, quicker and more precise delimiting efforts, and better planning for plant pest eradication or control efforts.

### Regulating Biotechnology in Agriculture

Scientists use agricultural biotechnology with a variety of laboratory techniques, such as genetic engineering, to improve plants, animals, and micro-organisms. Recent discoveries have led to virus-resistant crops such as cucumbers, tomatoes, and potatoes; to better vaccines and diagnostic kits used for diseases of horses, chickens, and swine; and even to new and improved varieties of commercial flowers.

Since 1987, APHIS' role in agricultural biotechnology has been to manage and oversee regulations to ensure the safe and rapid development of the products of biotechnology. Under APHIS' effective regulations and practical guidelines, applicants can safely field test—outside of the physical containment of the laboratory—genetically engineered organisms.

APHIS officials issue permits or acknowledge notification for the importation, interstate movement, or field testing of genetically engineered plants, micro-organisms, and invertebrates that are developed from components of plant pathogenic material.

Since 1987, APHIS has issued more than 8,700 release permits and notifications at more than 30,000 sites in the United States. The biotechnology regulations also provide for an exemption process

once it has been established that a genetically engineered product does not present a plant pest risk. Under this process, applicants can petition APHIS for a determination of nonregulated status for specific genetically engineered products. Over the past 10 years, 53 new engineered plant lines in 15 crops have been proven safe and no longer need to be regulated by APHIS. One was the first genetically engineered sugar beet, which is herbicide tolerant.

### Managing Wildlife Damage

The mission of APHIS' Wildlife Services (WS) program is to provide Federal leadership in managing problems caused by wildlife. Wildlife is a significant public resource that is greatly valued by the American public. But by its very nature, wildlife also can damage agricultural and industrial resources, pose risks to human health and safety, and affect other natural resources. WS helps solve problems that occur when human activity and wildlife are in conflict with one another. In doing so, WS attempts to develop and use wildlife management strategies that are biologically, environmentally, and socially sound.

The need for effective and environmentally sound wildlife damage management is rising dramatically. There are several reasons for this. Increased suburban development is intruding upon traditional wildlife habitats. Population explosions among some adaptable wildlife species—such as coyotes, deer, and geese—pose increasing risks to human activities. At the same time, advances in science and technology are providing alternative methods for solving wildlife problems.

More than half of U.S. farmers experience economic loss from damage caused by wildlife. WS plays a leadership role in cooperative efforts with the States and agriculture producers across the country to protect farm crops, livestock, aquaculture, and forest resources from damage caused by wildlife. Annual wildlife depredation losses to selected agricultural commodities in the United States have been documented by USDA's National Agricultural Statistics Service

(NASS). The losses for 2001 include estimated losses of more than \$178 million to livestock and poultry resources; over \$146 million in losses for producers of vegetables, fruits and nuts; and more than \$14 million in losses for producers of farm-raised catfish and trout. Wildlife damage to U.S. agriculture as a whole is estimated at approximately \$944 million each year.

WS deals with a wide variety of wildlife problems, ranging from reducing the threat of wildlife-borne diseases to managing hazards caused by wildlife at airports, to protecting endangered species from predation by other wildlife. Here are a few examples of WS recent efforts to manage the damage caused by wildlife in the United States:

- West Nile virus (WNV) is a disease that has enormous potential to impact public health, livestock, and wildlife. In 2001, West Nile virus was detected in 27 States and the District of Columbia. This represents a significant geographic expansion of the disease from when it was first discovered in New York. Birds serve as a natural host for the virus, which is transmitted to people and animals through mosquito bites. WS has played an integral part in detecting the spread of WNV through the collection of blood samples from wild birds.

- Wildlife collisions with aircraft cost the civil aviation industry in the United States more than \$300 million annually and pose a serious safety hazard to flight crews and passengers. WS is recognized internationally for its scientific expertise in reducing wildlife hazards at airports and military bases across the United States. Nearly 6,000 wildlife collisions with civil aircraft were reported in 2000. Currently, WS works at more than 350 airports around the country to provide information and equipment to airport managers to reduce the presence of wildlife, especially birds, around runways and airport operations areas. WS also provides hands-on assistance to trap and remove wildlife that are a threat to air safety. At airports and military airfields where WS operational projects

were conducted, the presence of wildlife was reduced by up to 95 percent.

- Beavers are one of the most destructive wildlife species, causing millions of dollars in damage to roads, bridges, dikes and dams, sewer and water treatment facilities, and landscape plants. In Mississippi and North Carolina, the problem is so severe that WS conducts Statewide beaver damage management programs that receive major funding from State agencies. In North Carolina alone, the beaver population is estimated at 500,000. WS also conducts large-scale beaver damage management programs in more than a dozen additional States, and responds to individual requests for assistance on a case-by-case basis.

APHIS' National Wildlife Research Center (NWRC), the world's only research facility devoted entirely to the development of methods for managing wildlife damage, accounts for about one-fourth of WS' budget. In existence since the 1940s, NWRC has an integrated, multidisciplinary research program that is uniquely suited to provide scientific information and solutions to wildlife damage problems.

### Humane Care of Animals

APHIS administers two laws that seek to ensure the humane handling of animals: the Animal Welfare Act (AWA) and the Horse Protection Act (HPA).

For more than a quarter century, USDA has enforced the AWA and its standards and regulations to prevent trafficking in lost and stolen pets and protect covered animals from inhumane treatment and neglect. The AWA prohibits staged dog-fights, bear and raccoon baiting, and similar animal fighting ventures. It also requires that minimum standards of care and treatment be provided for most warmblooded animals bred for commercial sale, used in research, transported commercially, or exhibited to the public. This includes animals exhibited in zoos, circuses, and marine mammal facilities, as well as pets transported on commercial airlines.

**Compliance Inspections, FY 1998–2000**

FY	Total facilities (sites)	Total compliance inspections
1998	7,773 (10,393)	10,709
1999	7,958 (9,897)	9,096
2000	8,773 (10,207)	8,727

**Sanctions Imposed, FY 1998–2000**

FY	Fines Imposed	Revocations, suspensions, and disqualifications
1998	\$378,900	34
1999	\$585,162	16
2000	\$343,301	23

Individuals who operate regulated businesses must be licensed or registered with USDA and provide their animals with adequate care and treatment in the areas of housing, handling, sanitation, nutrition, water, veterinary care, and protection from extremes of weather and temperature. They must also keep accurate acquisition and disposition records and a description of every animal that comes into their possession.

In enforcing the AWA, APHIS conducts prelicensing inspections of licensees. Before issuing a license, applicants must be in compliance with all standards and regulations under the AWA. APHIS also conducts randomly scheduled unannounced inspections to ensure that all regulated facilities continue to comply with the Act.

In FY 2000, APHIS pursued numerous cases against individuals who were not in compliance with the AWA. The tables above provide data on APHIS' inspection and enforcement efforts for FY 1998–00.

USDA also enforces the HPA, which prohibits horses subjected to a process called soring from participating in exhibitions, sales, shows, or auctions. In addition, the act prohibits drivers from hauling sored horses across State lines to compete in shows. The law was first passed in 1970 and amended in 1976.

**Aquaculture**

APHIS provides services to the aquaculture industry in a number of areas. Aquaculture is the fastest growing segment of U.S. agriculture, surpassing in value most domestic fruit, vegetable, and nut crops.

Current APHIS services include licensing of fish vaccines and other biologics under the Virus-Serum-Toxin Act; managing bird and mammal depredation to commercial fish stocks; and providing health certification services for exports. We are currently working to expand our aquatic animal health activities and underlying authority to support industry efforts to increase exports of aquacultural products around the world and for coordinating interstate regulation.

**FOR MORE INFORMATION**

Additional information about the agency is available through the World Wide Web: <http://www.aphis.usda.gov>

**Grain Inspection, Packers and Stockyards Administration**

The Grain Inspection, Packers and Stockyards Administration (GIPSA) facilitates the marketing of livestock, poultry, meat, cereals, oilseeds, and related agricultural products and promotes fair and competitive trading practices for the overall benefit of consumers and American agriculture.

**Federal Grain Inspection Program**

Through its Federal Grain Inspection Service, GIPSA facilitates the marketing of grain, oilseeds, pulses, rice, and related commodities. This program serves American agriculture by providing descriptions (grades) and testing methodologies for measuring the quality and quantity of grain, rice, edible beans, and related commodities.

GIPSA also provides a wide range of inspection and weighing services, on a fee basis, through the official grain inspection and weighing system, a unique partnership of Federal, State, and private agencies. In fiscal year 2001, the official system performed over 2 million inspections on 235 million metric tons of grain.

Specifically, under the U.S. Grain Standards Act, and those provisions of the Agricultural Marketing Act of 1946 (AMA) that relate to inspection of rice, pulses, lentils, and processed grain products, the Federal Grain Inspection Service:

- Establishes official U.S. grading standards and testing procedures for eight grains (barley, corn, oats, rye, sorghum, triticale, wheat, and mixed grain), four oilseeds (canola, flaxseed, soybeans, and sunflower seed), rice, lentils, dry peas, and a variety of edible beans.
- Provides American agriculture and customers of U.S. grain around the world with a national inspection and weighing system that applies the official grading and testing standards and procedures in a uniform, accurate, and impartial manner.

- Inspects and weighs exported grain and oilseeds. Domestic and imported grain and oilseed shipments, and crops with standards under the AMA, are inspected and weighed upon request.

- Monitors grain handling practices to prevent the deceptive use of the grading standards and official inspection and weighing results, and the degradation of grain quality through the introduction of foreign material, dockage, or other non-grain material to grain.

GIPSA also is developing standard testing procedures to identify grain quality traits desired by world markets and to better measure end-use functionality. By serving as an impartial third party, and by ensuring that the Official U.S. Standards for Grain are applied and that weights are recorded fairly and accurately, GIPSA and the official grain inspection and weighing system advance the orderly and efficient marketing and effective distribution of U.S. grain and other assigned commodities from the Nation's farms to destinations around the world.

#### **Packers and Stockyards Programs**

GIPSA's Packers and Stockyards Programs administers the Packers and Stockyards Act of 1921 (P&S Act), a fair trade practice and payment protection law that promotes fair and competitive marketing environments for the livestock, meat, and poultry industries.

#### **Payment Protection**

The P&S Act requires prompt payment for livestock and poultry purchased by firms and individuals subject to the Act. Purchase of livestock and poultry in cash sales must be paid before the close of the next business day. Poultry obtained under a poultry growing arrangement must be paid before the close of the 15th day following the week of slaughter. Packers, market agencies, and livestock dealers are required to maintain financial solvency and to have a surety bond to secure livestock purchases. As of May 21, 2002, bonds totaling \$572 million were in place to cover livestock purchases. In addition, sellers of livestock at auction are further protected by requirements that the markets have and maintain a custo-

dial (trust) account for consignor's proceeds. The custodial audit program has been very successful in protecting funds due livestock sellers.

#### **Packer and Poultry Trust Activities**

If a meat packer fails to pay for livestock in a cash sale, or a live poultry dealer fails to pay for live poultry from a poultry growing arrangement, then receivables, inventories, and proceeds held by the packer or poultry dealer become trust assets. These assets are held by the meat packer or live poultry dealer for the benefit of all unpaid cash sellers and/or poultry growers. Cash sellers of livestock and poultry growers receive priority payment in bankruptcy or in claims against trust assets in the event of business failure.

#### **Competition**

GIPSA works to eliminate unfair, unjustly discriminatory, or deceptive practices, and anti-competitive activities in the meat and poultry industries. Practices such as apportioning of territories, price manipulation, and arrangements not to compete are potential violations of the P&S Act. GIPSA deploys rapid response teams to immediately investigate any practice that could constitute unfair, unjustly discriminatory or deceptive practice under the P&S Act.

#### **Scales and Weighing Activities**

GIPSA is concerned with two different elements that affect the integrity of weights: (1) the accuracy of scales used for weighing livestock, meat, and poultry, and (2) the proper and honest operation of scales to assure that the weight on which a transaction is based is accurate. The major emphasis is on detecting improper and fraudulent use of scales. An investigative program uses several different procedures to determine whether weighing activity is proper and honest. Agency investigators routinely visit livestock auction markets, buying stations, and packing plants for the purpose of checkweighing livestock, carcasses, and live poultry, and examining weight records and equipment.

#### **Trade Practices**

Fraudulent trade practices, such as price manipulation, weight manipulation of livestock or carcasses, manipulation of carcass grades, misrepresentation of livestock as to origin and health, and other unfair and deceptive practices continue to be concerns in the livestock, meat, and poultry industries. GIPSA investigates these practices when complaints are received, or when such practices are uncovered during other investigations. GIPSA carries out enforcement of the trade practice provisions of the P&S Act relating to live poultry dealers. Its investigative program examines the records of poultry integrators to determine the existence of any unfair, unjustly discriminatory, or deceptive practices in its dealings with poultry growers and sellers. Complaints alleging unfair termination of growing contracts are investigated on a priority basis.

#### **Analysis of Structural Change**

GIPSA examines structural changes in the livestock, meatpacking, and poultry industries, and analyzes the competitive implications of these structural changes. The analyses assist in enforcing the P&S Act and in addressing public policy issues relating to the livestock and meat industries.

#### **Clear Title**

The Clear Title provisions of the Food Security Act of 1985 permit States to establish central filing systems to inform parties about liens on farm products. The purpose of this program is to remove an obstruction to interstate commerce in farm products. GIPSA certifies that a State's central filing system complies with the Act.

#### **Violation Hotline**

GIPSA has instituted a hotline for reporting potential violations and abuses in the grain, livestock, meat, and poultry industries. GIPSA's toll-free telephone number is 1-800-998-3447.

#### **Homepage**

For further details about GIPSA, visit the homepage at <http://www.usda.gov/gipsa>.

