Arizona Department of Agriculture

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Mission:
To regulate and support Arizona agriculture in a manner that encourages farming, ranching and agribusiness, while protecting consumers and natural resources.

Top left: Cow grazing near Eagle Claw Mountains

Top right: Minneola Tangelos, a tangerine-grapefruit hybrid

Bottom left: green oak and red oak used in "spring mix"

Bottom right: eggs being "candled" to check for cracks

Annual Report FY2007-2008

JANET NAPOLITANO
Governor

DONALD BUTLER
Director

Arizona Department of Agriculture

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September 30, 2008

Honorable Janet Napolitano
Governor, State of Arizona
1700 West Washington
Phoenix, AZ 85007

Dear Governor Napolitano:

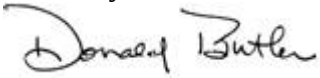
I am pleased to submit to you the Arizona Department of Agriculture's Annual Report for the fiscal year 2007-2008. Inside you will find the details about the many services provided by our department and the ways we have worked to better regulate and support Arizona agriculture while also protecting consumers and natural resources.

As you read through these pages, you will find our staff has been diligent in awarding grant funds, administering public advisory committees, training agricultural workers around the state and working to make sure we protect one of the safest and most affordable food supplies in the entire world.

In a time when people are becoming increasingly concerned and aware of their food sources, the Arizona Department of Agriculture has been working diligently to ensure that foods consumed by Arizonan's and their animals are safe and of the highest quality. We ensure that Arizona citrus, fruits and vegetables meet top quality standards, that meat, poultry, dairy, and egg products processed and consumed in Arizona are safe, that animal feed meets safety and label requirements, and that fruits, vegetables and plants brought into this state are not carrying harmful pests or diseases.

Those efforts are supported by your actions as well as those of the Arizona State Legislature to approve HB2462, which allows the Department to act quickly to generate revenue that will help to alleviate increasing operation costs. Thank you again for your support of Arizona agriculture and of our mission to regulate and support Arizona agriculture while protecting consumers and natural resources.

Sincerely,



Donald Butler
Director

DB/cr

Animal Services Division (ASD)

Food Safety, Quality Assurance

The Food Safety, Quality Assurance (FSQA) programs have been established to provide consumer protection at the production, wholesale, and retail levels. Though their primary function is public health, they also provide quality control of the regulated products. State statutes establish a cooperative relationship with other county, state, and federal programs, working together to ensure safe animal origin food products.

FSQA - Dairy & Dairy Products Inspection Program

From the farm until the products hit the retail store, dairy inspection staff inspect every part of the dairy industry. Starting with farm inspections, inspectors review overall farm sanitation, milking and milk handling equipment, use of animal drugs, and milking procedures. Refrigeration equipment is checked for prompt cooling of milk and water supplies are sampled to ensure they are potable as required. Water handling equipment and wells are inspected for compliance with public health standards for water potability.

Cooperative industry samplers

Annual or bi-annual inspections are made on both milk tankers and milk haulers who are licensed by the Department. After passing a test on milk handling and sampling, department-licensed haulers pull samples of all milk they transport for random sampling at destination by dairy inspectors. Samples selected for microbial or other types of testing are transported to the State Agricultural Laboratory for microbiological testing, freezing point, fat analysis, vitamin analysis, and other public health or quality testing. Besides fluid milk, other dairy products are tested for compliance with standards.

At processing plants, dairy inspectors inspect the entire facility, starting with water supplies, sanitation of the plant inside and out and for pest control measures. Inspectors check receiving facilities for milk handling when it arrives for processing. Pipes, hoses, and fittings are inspected to see that they are made of approved materials and are in a good state of repair. Inspectors also check packaging facilities inside the plant, sanitary procedures and record keeping. Periodic tests are made of pasteurization equipment by checking welds and overall condition of piping that transfers milk. Pasteurizers and holding tubes are also checked for proper pasteurization temperatures and times, as well as checking automated public health controls which divert milk when it has not been properly heat treated.

Calves at an Arizona dairy farm

Pasteurized Milk vs. Raw Milk; What's the Difference?

Nearly all milk in Arizona is sold pasteurized. This means the fluid milk is subjected to heat treatment for a specified period of time to kill organisms which may be present. Recently, industry has embraced the use of aseptic processing, at very brief high heat levels. This produces a shelf stable product which can be held at room temperature for weeks without being refrigerated.

A small quantity of milk sold in Arizona is processed and packaged as "raw" milk and is not heat treated to kill potentially pathogenic organisms. Although this milk must meet the same microbial standards as pasteurized milk, it can potentially contain harmful organisms. Raw milk is required to have a warning statement on the container so that potential consumers understand the potential risks of consuming it.

Another process sometimes confused with pasteurization is homogenization of milk. This is the process of breaking down fat globules in the milk so that cream will not be separated in fluid milk that contains milkfats. Most often, raw milk is not homogenized and cream will rise to the top of the container.

It is illegal to sell raw milk for human consumption in Arizona without first obtaining a grade A dairy permit. An exception is milk which is marked for pet consumption. Milk produced for pet consumption is blended with powdered charcoal to denature the milk and turn it gray in order to deter consumption by humans. Denaturing is not required if the milk meets all applicable standards for Grade A milk.

Interstate shipment of milk and dairy products

Some milk produced in Arizona is shipped to other states, either as fluid milk or other dairy products, in bulk or packaged form. The state of Arizona participates in the nationwide Interstate Milk Shippers (IMS) program, which creates a seamless nationwide inspection program under the regulation of participating states. Participation in this program is voluntary, with periodic visits being made by FDA staff that assist in standardizing both inspections and laboratory testing to the same regulatory standards nationwide.

FSQA - Egg & Egg Products Inspection Program

Egg inspection program staff provides inspection services to the public, industry, and the federal government. The egg inspection program is funded entirely from a "mill fee" assessment from

industry on each dozen of eggs or pound of egg products sold in Arizona and receives no general funds from the state.

Program staff inspects shell eggs and egg products from production at laying facilities to wholesalers and retail stores. Inspectors verify that products are held at temperatures of forty-five degrees Fahrenheit for eggs and zero degrees Fahrenheit for frozen egg products. Inspectors verify proper packaging, sanitary handling, dating, and weighing of eggs at production facilities, warehouses, or retailers for product originating out of state.

Eggs processed or sold in Arizona are marked with mandatory "Sell By" or "Buy Thru" dating with the expiration date no more than 23 days after packing. This is one of the shortest mandatory code date standards in the United States and helps to ensure that eggs continue to meet the marked grade after they are purchased by consumers.

USDA Inspection and Grading Program

The department also maintains cooperative programs with the U.S. Department of Agriculture (USDA) to provide "grade labeling" services to industry upon request. These cooperative programs also include surveillance and enforcement under the federal Egg Products and Inspection Act, which regulates the movement and processing of certain types of under-grade eggs to keep them from entering the market. The department also enforces the Agricultural Marketing Act.

Inspectors provide inspection services for USDA's school lunch program for poultry purchases made on behalf of school districts statewide. Warehouses receive truckloads and rail car deliveries of poultry products that our inspectors check for proper handling in transit, including temperature checks.

Graders perform both temporary and resident (in-house) grading services to the egg industry in Arizona. Five state employees are stationed at three packing plants and provide inspection/grading services 365 days a year, 7 days a week. Under this USDA program, resident graders continually monitor plant sanitation, processing temperatures, handling, and holding cooler temperatures. Eggs packed under USDA program supervision are eligible to be marked with USDA shield grademarks or other USDA identification. This USDA shield marking is valuable because many entities require it for sale, such as some grocers, commercial foodservice, foreign countries and the U.S. military. A fourth packing plant is expected to be added under the USDA program, possibly in 2010.

Governor Napolitano inspecting egg processing equipment at
Hickman's Egg Ranch in Maricopa, Arizona, during a tour

FSQA *- Meat and Poultry Inspection Program*

The meat and poultry program is a federal-state cooperative program funded 50% from the state general fund and 50% by USDA-FSIS. The program oversees slaughter of amenable meat animals and poultry, which is offered for official inspection prior to sale to the public. Operating to help ensure both food safety and truth in labeling to consumers, inspectors visit regulated facilities on a daily basis. The program authority is established by state statutes and rules, the Federal Meat Inspection Act, and the Federal Poultry Products Inspection Act.

This general fund program receives 50% in matching funds from USDA to conduct many types of meat and poultry inspections at the wholesale level. Inspectors staff and supervise plants under official inspection which sell meat and poultry in both wholesale and retail trade. Inspectors also periodically visit other processors known as "custom exempt" processors, which are firms that process meats, game, and poultry for the personal consumption of the livestock owner. These types of processors may not sell meats to the general public without obtaining an official slaughter and processing license.

Department inspectors receive training including Hazard Analysis Critical Control Point (HACCP) inspection procedures, Sanitation Standard Operating Procedures, and animal ante and post mortem inspection procedures for disease. Before processing our inspectors review general sanitation, processing procedures and HACCP plans. Inspectors visit plants to check for compliance with state and federal regulations, and to check that the firms are in compliance with their own HACCP plans and operating procedures. Inspectors ensure that microbiological samples from the facility and product are reviewed at official labs.

In order to verify compliance with label formulations, meat samples are taken to analyze fat content, water content, spices, additives, and other items. Inspectors and program management staff check product formulations prior to product approval. Products that meet regulatory requirements receive a triangular "mark of inspection", which shows that it is a product approved by the agency.

FSQA *- Meat and Poultry Compliance*

An integral part of the meat and poultry program is compliance. The department's Compliance Officers and other staff are utilized to enforce both Arizona and federal statutes, with respect to legal slaughtering, truck wrecks involving meat products, and meat and poultry products that have been illegally imported into Arizona and/or the United States. Compliance helps to ensure that animals are slaughtered in a humane fashion and that meats are processed in a sanitary and safe manner.

In the past few years, the agency has been successful in shutting down several illegal slaughter facilities, securing fines, probation, and in some cases, mandatory public service for the owners. The Arizona Department of Agriculture acknowledges the assistance of Maricopa County Attorney Andrew Thomas and his staff in the prosecution and conviction of the owners of these illegal operations.

The department appreciates the FSQA compliance officers and other staff who were involved in the night and weekend undercover work which curtailed these illegal operations and to the State Agriculture Laboratory staff who analyzed meat that was purchased during the undercover operations. In one case, laboratory staff detected salmonella bacteria in illegally processed chorizo that was purchased by an undercover agriculture employee posing as a customer.

An illegal hog slaughter operation, which was used to provide meat for a restaurant in East Central Arizona. The facility is now closed. Notice the unsanitary conditions these pigs were being raised in. The responsible individual was a repeat violator.

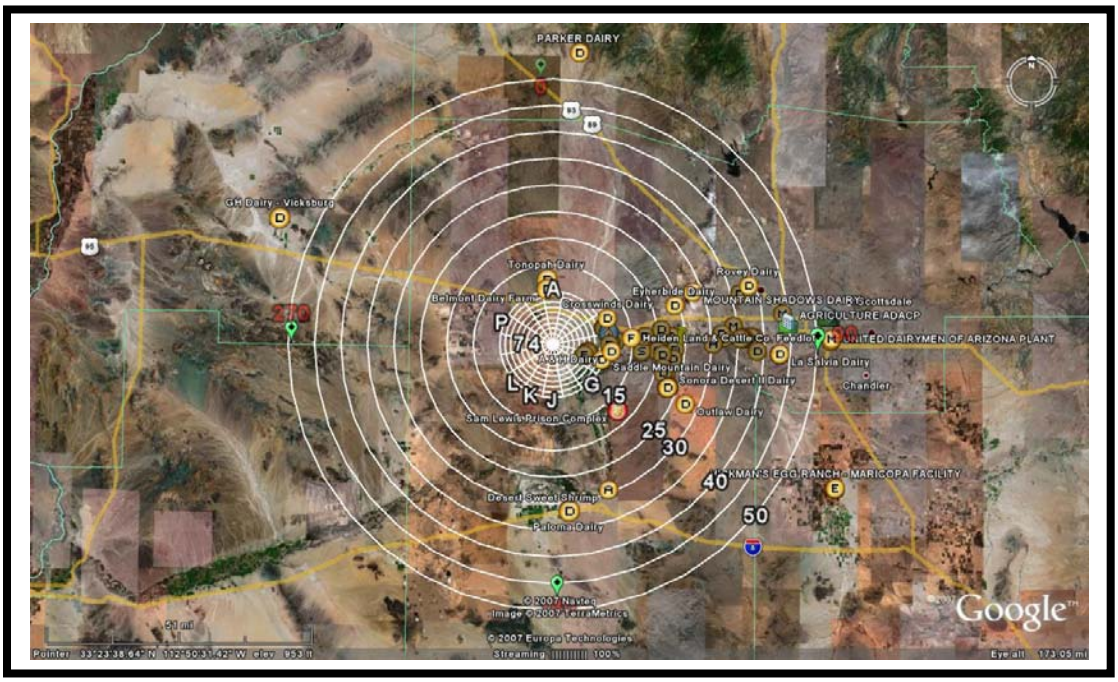
Another illegal slaughter facility located by the Salt River. Note the animal carcasses lying on the concrete. Handling meat under such conditions, exposed to high temperatures, dust, insects, and without potable water presents a potentially serious health risk to the public. The owner of this facility is now complying with regulations, and is building a new, ADA regulated slaughterhouse.

Palo Verde Nuclear Generating Station – Fixed Nuclear Facility – Emergency Response

The Arizona Department of Agriculture is an integral part of the state and county response to any emergencies related to the Palo Verde Nuclear Generating Station located West of Phoenix. With three reactors, this is the largest nuclear power plant in the United States, with the capacity to serve millions of homes.

In cooperation with state, county, and federal agencies, the department participates yearly in nuclear preparedness drills. Every other year and every sixth year, federal agencies grade the state response during drills and prepare a written evaluation. Every other year, an exposure exercise is conducted, with an "ingestion" exercise every sixth year. A passing grade from cooperating agencies is required for Palo Verde to maintain an operating license by the Nuclear Regulatory Commission.

The Arizona Department of Agriculture will be participating in the next federally evaluated exercise in March of 2009. The FSQA programs will continue to play an integral role in departmental participation in this drill, which also includes Citrus, Fruit and Vegetable staff, animal health veterinarians and livestock officers.



AN AERIAL VIEW OF THE 50 MILE PALO VERDE PLANNING ZONE, ESTABLISHED IN CASE OF WIND DRIFT OF RADIOACTIVE MATERIALS AWAY FROM THE PLANT. THE 10 MILE EMERGENCY ZONE WOULD BE A PRIMARY FOCUS DURING AN EMERGENCY.

A history of service with a priority of consumer protection

Working closely with county health departments and other state and federal agencies, FSQA has a long history of service to consumers. Some six years after Arizona statehood, the Office of the Dairy Commissioner was established in 1918 as one of the first public health programs in the State of Arizona. It was followed by the establishment of the egg inspection program in 1939, which had a major role in not only egg inspection, but procurement of poultry products for the then War Food Administration during multiple wars. The meat and poultry program similarly has had decades of service to the public and the livestock industry in Arizona

Questions from the public about any food products under the regulatory jurisdiction of the department are answered promptly. Field inspectors or sanitarians are dispatched to check on the product purchased if the situation requires. If the concern is quality or weight related, there is often prompt resolution. Any concerns relating to human illness are promptly addressed, often in cooperation with other agencies. Such concerns are the primary focus of the programs.

Animal Health and Welfare Program

Priorities and Oversight

The highest priority of the Animal Health and Welfare Program (AHWP) is the prevention, rapid identification of, and response to, diseases of livestock, poultry and commercial fish - some of which are transmissible to humans. In addition to diseases that are normally foreign to the

United States, these diseases include many that exist in other parts of the U.S., but have never been identified in Arizona, or have been recently eliminated from Arizona.

The Department's Office of the State Veterinarian (OSV) oversees the AHWP responsible for safeguarding our livestock, poultry and commercial fish resources from devastating diseases, protecting the public from livestock diseases transmissible to people, and from harmful livestock interactions. Additionally, the staff veterinarians in the AHWP provide veterinary expertise to the Meat and Poultry Inspection Program responsible for the oversight of livestock and poultry slaughtering as well as processing. Under authority of agricultural and criminal statutes, field staff in the AHWP is active in ensuring the humane treatment of livestock.

The State Veterinarian provides the technical expertise to the AHWP and collaborates with state and federal government agencies in the U.S. as well as Mexico in the enforcement of laws to control livestock and poultry diseases such as Foot and Mouth Disease, Bovine Spongiform Encephalopathy (Mad Cow Disease), Tuberculosis and Brucellosis in cattle, Brucellosis and pseudorabies in feral and domestic swine, scrapie in sheep, chronic wasting disease in deer and elk, rabies in all animals, and other diseases that are foreign to the United States.

The department's AHWP officers and inspectors provide a valuable service to the people of Arizona by protecting livestock from contagious and infectious diseases, documenting animal movement, and regulating the health of animals. Acting on behalf of the State Veterinarian, officers and inspectors may enter any premises where livestock are kept or maintained to examine for evidence of disease and ownership, and to confirm their humane care. The field component of the AHWP consists of ten officers and eight inspectors who are assisted by a force of part-time deputies who help during increased inspection demands. Two officers have received advanced training in equine welfare issues and take the lead in complicated welfare cases.

Animal Health Programs

Ongoing state/federal/industry programs for the elimination of Brucellosis and Tuberculosis in cattle; pseudorabies in swine; and equine infectious anemia in horses, continue to be the major focus of field veterinarians. Scrapie in sheep; Chronic Wasting Disease (CWD) in cervids; Johne's Disease in cattle; and West Nile Virus in horses, have taken considerable staff time this year.

Control & Eradication Program Surveillance Statistics

Bovine Brucellosis – Live Animal Blood Tests	8,952
Bovine Brucellosis – Blood Samples Collected at Slaughter	200,237
Swine Brucellosis – Blood Tests	382
Bovine Tuberculosis – Tuberculin Skin Tests	84,627
Equine Infectious Anemia – Blood Tests	14,752
Official Calfhood Brucellosis Vaccinations	77,900

Foreign Animal Diseases

Exotic Newcastle Disease (END) and Avian Influenza (AI)

The surveillance program for AI continues with assistance from the USDA as well as states' and industry stakeholders. As part of the surveillance program for AI, the University of Arizona Veterinary Diagnostic Laboratory continues to conduct diagnostic screening on poultry samples submitted by AHWP staff as well as on wild birds submitted by the Arizona Game and Fish

Department and USDA Wildlife Services. Poultry samples are also screened for END. During FY 2007, an outreach folder containing information on AI and END, as well as information on biosecurity for poultry flocks was disseminated statewide to non-commercial poultry owners. A second outreach cycle was carried out for FY 2008. In order to support a response to either of these diseases, the effort to GIS map premises housing non-commercial poultry continues. Other outreach activities include veterinary staff presentations on AI and END throughout the state and providing training to the department's AHWP field personnel. That training included proper use of personal protective equipment and sampling procedures for poultry. In conjunction with the Arizona Department of Health Services, the department held a table-top exercise on AI and worker protection. A follow-up exercise is planned for Fall 2007. ADA anticipates ongoing funding from USDA on AI and END surveillance/response preparation activities.

Foreign Animal Disease Program Surveillance Statistics

Early recognition of Foreign Animal Disease (FAD) is paramount to reducing the impact of a devastating disease outbreak. Field investigations of possible FAD performed by federal and department staff veterinarians during the past year include:

Cattle	1
Equine	13
Chickens	2
Koi Fish	1
Total Investigations	17

All FAD investigations were conducted within 24 hours of notification and, with the exception of one case, were negative for FAD. This demonstrates the department's commitment to rapid investigation. The one positive FAD diagnosis was a horse infected with equine piroplasmosis that had been smuggled into Arizona from Mexico. The department and USDA initiated a rapid response to confirm the diagnosis, remove and humanely euthanize the infected horse as well as confirm that there had been no spread to other horses on the premises.

Bovine Spongiform Encephalopathy (BSE)

Although USDA's enhanced surveillance program for BSE has concluded, maintenance surveillance activities continue with the department assisting USDA in investigating and collecting samples from on-farm mortalities succumbing to CNS disease.

Animal Movement Regulations

The AHWP is focused on protecting and regulating the livestock industry. While the primary focus is protecting livestock from animal disease and ensuring their humane care, the AHWP works with the department's Central Licensing Self-Inspection Program to oversee the owner-generated documentation of the movement of Arizona livestock. The ability to trace the movement of animals through the marketing chain is the cornerstone of an effective disease control program. If a diseased animal is located, knowing where the animal has been enables identification of potentially exposed animals and the implementation of disease mitigation strategies.

National Animal Identification Program

The voluntary National Animal Identification System (NAIS) in Arizona continues to be overseen by the department. The focus of the program continues to be premises registration (Premises ID) for all eligible producers of beef and dairy cattle, and sheep and goat owners. Registered premises are assigned a seven digit, alpha-numeric Premises ID number. This effort continues to require a monumental outreach effort in order to educate all livestock and poultry owners. ADA continues to receive funding for this voluntary program. As the program evolves, use of NAIS compatible animal identification tags (that may or may not be electronic) will be phased in.

The department completed three pilot projects with several different ranchers, dairymen, feedlots, and two harvest houses. These projects, funded by USDA, were educational projects allowing us to learn and recognize the best methods of tagging and tracking cattle. The projects helped identify problems in tagging and tracking cattle that can be improved before the program moves to wider use of identification tags and tracking systems.

Both the Hopi Tribe and Navajo Nation have implemented premises identification and are applying electronic identification tags (EID's) to their cattle. This will enable the cattle to be tracked as they are moved through Sun Valley Livestock Auction in Holbrook, Arizona. The Sun Valley Livestock Auction was part of one of the pilot projects and was set-up to read the EID tagged cattle as they come into the auction. The Tohono O'odham Nation has started the process of getting premises identification numbers for their members.

The department continues to work with county Cattlemens' Associations by conducting outreach to educate cattle owners on the merits of the NAIS program. ADA assists those that are willing to use NAIS compatible animal identification tags and track them through auction markets. Success stories have helped to educate other producers and motivate some to participate in the program.

Annual Licenses

Aquaculture

The aquaculture program regulates commercial operations that grow, transport, and process fish and shrimp. Numbers of licenses issued: transporters (14), processors of fish and shrimp for human consumption (7), growing facilities (16), research and educational facilities (7), and operations that charge a fee for fishing (5).

Feedlots

Twenty-nine licenses for feedlots (required by those with capacity of greater than 500 head) were issued.

Inspection Data Tracking

The Livestock Inspection Program tracks field activities with the dispatch Radio Log Identification System. Since 2002, a number of activities have been closely monitored and include such items as the number of inspections for health, the movement of range cattle, cattle for processing, the number of investigations for animal care issues, stray animals/animals-at-large, and livestock theft. The inspection data closely tracks the changes that have occurred in the past three years.

Surveillance Statistics

Currently, over 2,600 producers are approved to use self-inspection. Livestock owners understand the value of documenting animal movement and have accepted responsibility for intrastate documentation through self-inspection. AHWP officers, inspectors and deputies document sales and interstate movement of range cattle, and movement of cattle to custom exempt slaughter plants. The sheep, goat and swine industries continue to support the inspection statute and rules governing their respective species. Exhibitions, fairs and shows have also been supportive of the "seasonal exhibition pass" implemented by rule. Livestock theft investigation and enforcement cases remain at a low level and Arizona continues to maintain disease free status in all industry/state/federal cooperative disease control programs.

Livestock Import Summary

CLASS OF LIVESTOCK	NUMBER OF IN SHIPMENTS	TOTAL ANIMALS
Dairy Cattle Replacements	505	31,079
Beef Cattle	3,382	432,836
Swine	326	13,811
Sheep and Goat	424	54,555
Horses	6,885	17,454
Fish and Shrimp	135	unavailable

Field Investigations and Inspections Summary

Category Name	Total number
Health and Movement Inspections	4,449
Butcher Inspections	1,211
Animal Care Investigations	2,175
Animals-at-Large Investigations	1,627
Self-inspection certificates issued	35,805
Theft Investigations	25

Arizona Livestock Incident Response Team Program

The Arizona Livestock Incident Response Team (ALIRT) program was implemented through legislative authorization in FY 2005. Annual funding secured by the efforts of the Arizona Cattle Growers' Association has been used to train and equip participating private veterinarians to conduct investigations of unusual livestock disease events and to conduct outreach and education to the livestock producers. Since its initiation, several investigations have been conducted and in every case the response resulted in a preliminary diagnosis within 48 hours with laboratory diagnosis confirmation soon after. ALIRT is an emergency response program overseen by the department and implemented through cooperation with the University of Arizona Department of Animal Science, and the Department of Veterinary Science Veterinary Diagnostic Laboratory. USDA Wildlife Service and Veterinary Service actively participate in a program designed to facilitate the potential diagnosis of unexplained cattle losses. Once a problem has been discovered, various levels of response may be indicated. It all starts with the producer, local

veterinarian and/or the local University of Arizona Cooperative Extension Office. If warranted, trained ALIRT private veterinarians will respond to the scene, start the investigation, and collect samples. This is followed by a conference call of the ALIRT steering committee that determines what, if any, additional actions are necessary. The cost of case work-up is covered by ALIRT program funding, and includes expenses for the ALIRT private veterinarian, other response personnel, as well as laboratory expenses related to the diagnosis. Once a diagnosis is made and/or a treatment program is implemented, the expense becomes the responsibility of the producer. The producer plays a key roll in this process, starting with the reporting of a problem in his herd. The producer also is important in preparing a herd history and identifying any contributing factors that may assist in diagnosis. The ALIRT program only responds at the invitation of the owner or manager and is available to individual producers who have significant unexplained animal illnesses and/or death, or if an area or region is having multiple suspicious livestock losses. The ALIRT program was designed for the producer and all information collected remains confidential. Emergencies are reported by calling the Arizona State Veterinarian Hotline at 888-745-5334 or the University of Arizona Veterinary Diagnostic Laboratory at 520-621-2356.

Citrus, Fruit & Vegetable (C, F &V)

Standardization and Federal-State Inspection

Arizona ranks third in the nation for overall production of fresh market vegetables. Arizona acreage produced over 86 million cartons of fresh produce last year. Arizona ranks second in the nation in production of iceberg lettuce, leaf lettuce, romaine lettuce, cauliflower, broccoli, spinach, cantaloupes, honeydews, and lemons.

The top ten commodities, which account for 86% of the states total produce production, based on carton count for FY 2008 are as follows:

Iceberg lettuce	22,685,787	Watermelon	4,466,137
Romaine lettuce	12,227,027	Tomatoes	3,808,556
Cantaloupe	10,515,149	Spinach	3,167,027
Leaf lettuce	6,010,139	Cauliflower	2,958,815
Broccoli	5,742,744	Spring Mix	2,934,289

As detailed below, the Citrus, Fruit & Vegetable Standardization Program and the Federal/State Inspection Program conducted 47,800 inspections last year. In addition, the Citrus, Fruit & Vegetable Standardization Program issued 470 licenses to the produce industry.

Industry Funded -- Industry Supported

Both of these programs are entirely self-funded and receive no general fund allocations. Industry supports the Citrus, Fruit & Vegetable Standardization Program through license fees and carton assessments, which are reviewed monthly and adjusted yearly. The Federal/State Inspection Program is entirely funded on a fee-for-service basis.

The Citrus, Fruit, and Vegetable Advisory Council, by statute, is comprised of governor-appointed citrus producers from specified counties, fruit or vegetable producers from specified counties, an iceberg lettuce producer from Yuma County and an Arizona apple, grape, or tree fruit producer. This group of leaders of their respective industries meets quarterly with staff of the Citrus, Fruit & Vegetable Program to review program policy and budgetary items.

Standardization Program

Arizona citrus, fruit, and vegetable producers rely on the Arizona Department of Agriculture for increasing the potential for domestic and international marketing, protecting against exporting, importing, selling of substandard produce by development, and enforcement of uniform standards. It is the Citrus, Fruit & Vegetable Standardization Program (CF&V) that assists the Arizona produce industry, including growers, shippers, contract packers, dealers and commission merchants in complying with product quality standards.

The Citrus, Fruit & Vegetable Standardization Program maintains the product quality standards established for each commodity produced or marketed in Arizona. Program inspections are conducted to verify quality (such as color, shape, bruising and decay, size, maturity, processing and labeling). These inspections take place in fields, packinghouses, coolers, and warehouses. Because of the CF&V Program, the Arizona produce industry has the quality control necessary for the marketing of their products.

Arizona industry produces an immense variety of citrus, fruits, and vegetables available to consumers throughout the year. Citrus, Fruit & Vegetable Program inspectors check for various factors. In citrus, for example, they test for maturity and size, which is important to shippers. Melons are tested for ripeness and sugar content. All vegetables and fruits are inspected for defects, such as scars or irregularities of shape, which is important for customer appeal.

Federal-State Inspection Program

This year the Citrus, Fruit & Vegetable Standardization Program successfully completed its eleventh year managing the Federal/State Inspection Service, Fresh Produce Inspection and Terminal Market Programs in Nogales, Phoenix, and Yuma under a cooperative agreement with United States Department of Agriculture. Mandatory as well as voluntary United States Department of Agriculture inspections are performed by Arizona Department of Agriculture staff (federal/state inspectors) and take place primarily at the shipping point (point of origin), port-of-entry (Arizona-Mexico border) or the terminal market (point of destination).

This federal program administered by the department also enforces United States import requirements and marketing order restrictions at the international border between Arizona and Mexico. Significantly, Nogales is the second busiest port-of-entry for produce in the United States. Last year, department staff inspected more than 15.2 million packages of tomatoes and 15.8 million lugs of table grapes imported from Mexico and a variety of other commodities, including watermelons, peppers, cucumbers, squash, onions and citrus.

It is important to note that the Citrus, Fruit & Vegetable Program and the Shipping Point Inspection Program in Yuma and Phoenix developed cost-reduction efficiencies for Arizona's agriculture industries through the cross-training of department inspectors to handle both state and federal inspections as well as phytosanitary certifications.

Third Party Audit Program

At the request of Arizona fresh produce industry representatives, Arizona Department of Agriculture, along with other western State Departments of Agriculture and the United States Department of Agriculture, developed a Third Party Audit Program within the existing framework of USDA Agricultural Marketing Service Federal/State Inspection. The resulting program is designed to audit the Good Agricultural Practices and Good Handling Practices for the produce industry. Federally licensed state inspectors perform these audits at industry's request.

Arizona Leafy Green Products Shipper Marketing Agreement

In September 2007, Arizona farmers came together to raise the bar for food safety. The produce industry solicited for the first Marketing Agreement in the history of the Arizona Department of Agriculture. As a result the Arizona Leafy Green Products Shipper Marketing Agreement (AZ LGMA) was formed.

The general purpose of this Marketing Agreement is to enable shippers of leafy green products to engage in mutual help and continue the production of high quality leafy green products grown in this State. The primary purpose of this Marketing Agreement is to authorize signatory shippers to certify safe handling, shipment and sale of leafy green products to consumers by adopting leafy green best practices and by using an official mark. The Marketing Agreement will permit the advertisement and promotion of the use of the official mark and the education of consumers about the meaning of the official mark.

Members of the AZ LGMA are working collaboratively to protect public health by reducing potential sources of contamination in Arizona-grown leafy greens. Leafy green products of the AZ LGMA include: iceberg lettuce, romaine lettuce, green leaf lettuce, red leaf lettuce, butter lettuce, baby leaf lettuce (i.e., immature lettuce or leafy greens), escarole, endive, spring mix, spinach, cabbage, kale, arugula, or chard.

Assessments on signatories to the Arizona Leafy Green Products Shipper Marketing Agreement are based on cartons or carton equivalents of affected commodities sold. Shipper means a person that engages in shipping, transporting, selling, or marketing leafy green products under his or her own registered trademark or label or a person who first markets the leafy green products for the producer. It does not mean a retailer.

Currently the AZ LGMA has 40 signatory shippers that represent 86% of the volume leafy greens grown in Arizona. AZ LGMA membership requires verification of compliance with the accepted food safety practices through mandatory government audits. University and industry scientists, food safety experts and farmers, shippers and processors developed these food safety practices. These companies have committed themselves to sell products grown in compliance with the Arizona Metrics, food safety practices accepted by the AZ LGMA Marketing Committee.

Department Pride in the Statewide Gleaning Project

Governor Janet Napolitano issued an Executive Order in 2003, extending the Arizona Statewide Gleaning Project. Gleaning is the harvesting of surplus crops, and the governor's project distributes these gleaned crops to those in need. The Arizona Department of Agriculture plays an integral role in the statewide gleaning effort in that Citrus, Fruit & Vegetable Standardization Program inspectors notify key food bank officials of upcoming seasons, and identify potential crop donations. Participating producers are then able to donate surplus crops, instead of discarding them, by allowing volunteers, inmate labor, and food bank staff to glean their fields. Several state agencies support other portions of the program and this combined effort resulted in

over 14 million pounds of produce collected and distributed to food banks and other organizations serving those in need during this past year.

Agricultural Consultation & Training (ACT)

The Agricultural Consultation and Training Program is an innovative compliance assistance program unique to an agricultural regulatory agency. This program embraces the Arizona Department of Agriculture's (ADA) goal of encouraging farming, ranching and agribusiness, while protecting consumers and natural resources by utilizing a non-enforcement approach. ACT is not affiliated with any of ADA's enforcement programs, allowing staff members to provide a formal means by which the regulated agricultural community may request compliance assistance without regulatory intervention. Agricultural Consultation and Training serves Arizona's diverse agricultural community by promoting agriculture, conducting training and increasing voluntary compliance and awareness of regulatory requirements and providing agricultural conservation education through the following compliance assistance and education programs:

- Pesticide Safety
- Air Quality
- Agricultural Conservation Education

The Agricultural Consultation & Training Program also houses the following programs:

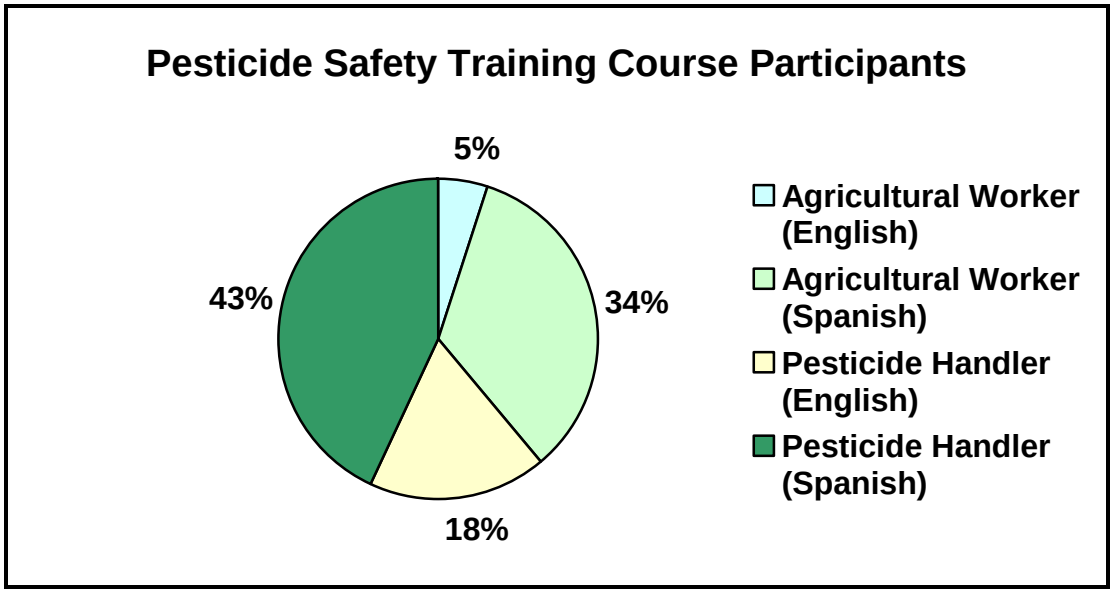
- Livestock & Crop Conservation Grant Program
- Specialty Crop Block Grant Program
- Arizona Citrus Research Council
- Arizona Iceberg Lettuce Research Council
- Arizona Grain Research and Promotion Council
- Agricultural Employment Relations Board
- Arizona Agricultural Protection Commission

Pesticide Safety Compliance Assistance

The Environmental Protection Agency's (EPA) Worker Protection Standard (WPS) is designed to reduce the risk of pesticide exposure to pesticide handlers, agricultural workers and the environment. The WPS includes requirements for pesticide safety training, notification of pesticide applications, use of personal protective equipment, restricted entry intervals following pesticide application, decontamination supplies and emergency medical assistance. Staff of the Agricultural Consultation and Training (ACT) program assist growers in complying with federal and state Worker Protection Standards by providing pesticide safety training for pesticide handlers and agricultural workers, developing pesticide information resources in English and Spanish, and performing mock inspections to assist farm and nursery owners in complying with pesticide regulations.

Pesticide Safety Training

During FY 2008, ACT staff presented pesticide safety training to 824 pesticide handlers and agricultural workers employed at 83 agricultural operations throughout Arizona. As is noted in the following chart, 61% of the people who received training were pesticide handlers who work directly with pesticides or pesticide residues. Of the pesticide handlers, 150 attended a two-hour pesticide safety course in English and 359 attended the same course in Spanish. The remaining 39% of the people who received pesticide safety training attended a one-hour course for agricultural workers. An agricultural worker performs tasks such as weeding, irrigating, and harvesting crops in areas where pesticides have been applied in the previous 30 days. Thirty-seven of the 315 agricultural workers who attended this training received the information in English and 278 received the information in Spanish. The following chart shows the percentage of attendance in each type of training.



Joint Pesticide Safety Train-the-Trainer Workshops

The Arizona Department of Agriculture's (ADA) Agricultural Consultation and Training Program continued their partnership with pesticide safety instructors from ADA's Environmental Services Division, Environmental Protection Agency in Region 9, California Department of Pesticide Regulation, the Colorado River Indian Tribes, the Fort Yuma Quechan Indian Tribe and Comité Estatal de Sanidad Vegetal de Guanajuato, Mexico (CESAVEG), to present multi-jurisdictional pesticide safety train-the-trainer workshops. As a result of this collaboration, the "Joint Train-the-Trainer Workshop for Pesticide Safety Educators in Arizona, California, Mexico and Tribal Communities" was presented in San Marcos, California in October 2007 and Yuma, Arizona in April 2008.

Seventy-five people representing farms, nurseries, farm worker outreach projects, health clinics, tribal pesticide programs, insurance companies, and regulatory agencies became qualified to train agricultural field workers and pesticide handlers through the FY 2008 workshop series.

The two-day workshops were designed to increase knowledge on human and environmental health issues when working with pesticides and steps to reduce exposure to agrichemicals. Important pesticide safety and health information such as pesticide label comprehension,

personal protective equipment, environmental protection, health issues and pesticide emergency response were included.

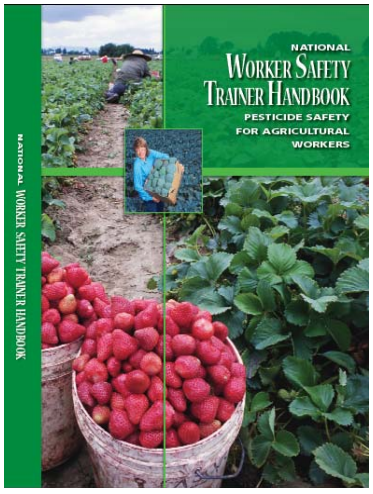
A variety of hands-on training techniques and group activities were used throughout the courses to demonstrate ways to extend pesticide safety information to pesticide handlers and agricultural fieldworkers. Participants also received an overview of the Workers Protection Standard and learned about pesticide laws and regulations that are unique to Arizona, California, Mexico and local tribal communities.

Workshop attendees have fun acting out a pesticide exposure role play during the Joint Train-the-Trainer Workshop in Yuma.

The workshops have served the informational and resource needs of pesticide safety educators who work in the border regions of California/Baja and Arizona/Sonora, Mexico, as well as those who travel with their companies and are responsible for training agricultural employees in multiple jurisdictions. Project team members will continue this collaborative project by offering the course in Baja California and Sonora, Mexico in 2009 and 2010. Funding for the workshop series has been provided to ACT through a technical assistance agreement with the Environmental Protection Agency, Region IX, Borders 2012 Program.

Pesticide Safety Teaching Tools, Informational Resources, and Training Modules

ACT staff develops and adapts existing teaching tools, informational resources, and training modules for use during safety events and for distribution to agricultural employers, employees, health care professionals, and people who are responsible for extending pesticide safety information.



In fiscal year 2008, ACT staff served on one national and three regional workgroups to develop and review pesticide safety training resources and course curricula.

The National Association of State Departments of Agriculture (NASDA) Research Foundation and U.S. Environmental Protection Agency's (EPA) Office of Pesticide Programs invited ACT staff to assist with the development of the "National Worker Safety Trainer Handbook: Pesticide Safety for Agricultural Workers. " This comprehensive handbook provides trainers with information about pesticide safety, the federal Worker Protection Standard, as well as tips for presenting effective training sessions. The publication was distributed to state departments of agriculture, cooperative extension service offices, tribal pesticide programs, worker safety training organizations and advocacy groups throughout the United States.

In addition to working on the national handbook, ACT staff joined three teams of bilingual pesticide safety educators to assist with projects spearheaded by pesticide safety program staff at Washington State University and funded by EPA. Project tasks included creating an Integrated Pest Management (IPM) curriculum and short course for Spanish-speaking landscape employees and editing English- and Spanish-language film scripts for two pesticide safety videos.

Air Quality Compliance Assistance

Regulated Agricultural Best Management Practices

The Regulated Agricultural Best Management Practices (RABMP) program has completed its fifth year of providing air quality compliance assistance to Arizona's agricultural community. The RABMP program provides a means by which Arizona's agricultural community can request compliance assistance without imposing regulatory intervention for applicable federal, state and local regulation.

The federal Clean Air Act requires that air pollutant emissions be controlled from all significant sources in areas that do not meet the national ambient air quality standards. Air quality regulation for agricultural dust requires farmers and nurserymen in certain parts of Arizona to implement agricultural best management practices (BMPs) to help reduce air pollution, especially particulate matter (PM10). Agricultural BMPs are feasible and effective practices that have been evaluated for their efficiency, applicability and likelihood for implementation, adopted into state regulation. Examples of such BMPs are:

Watering is a BMP in the non-cropland category. Applying water from a truck, tractor or other portable sprayer to unpaved roadways and equipment yards, will help reduce PM10. Watering the soil surface tends to compact the soil so that it is not dispersed into the air.

- Limiting farming activities during high wind events thereby reducing the transport of PM10.
- Using an irrigation management system that conserves water, reduces weeds and results in less soil compaction and need for tillage.
- Combining tractor operations that reduce the number of passes on a field and the amount of soil disturbed.
- Using integrated pest management to reduce the number of passes for spraying and need for additional tillage.
- Harvesting a forage crop without allowing it to dry in the field.

Outreach and education is provided to Arizona's agricultural community about air quality in an effort to reduce regional dust pollution through:

- On-site visits to farms and nurseries to make site specific assessments and recommendations that can ensure compliance with air quality regulations. These visits include discussions of the Ag BMP program and the BMPs available for tillage and harvest, non-cropland, and cropland categories.
- Training for farm workers on agricultural BMPs, what employers are doing to comply with laws and ways workers can get involved in reducing agricultural air pollution. A video is provided during training, in both Spanish and English, which explains how dust affects our health, where agricultural dust can come from and what to do if excessive dust is reported to a regulatory agency.
- Faxing high wind advisories to the regulated agricultural communities of Maricopa and Yuma counties. This type of notification system alerts the producer of possible PM10 exceedances

and stagnant air conditions. During these forecasted conditions, producers are encouraged to implement their dust control action plans.

- Providing "Fly in the Eye – Air Quality in Action", a quarterly air quality newsletter to the agricultural community. This newsletter features columns on air quality issues impacting all areas of agriculture in all parts of the state, a "Featured BMP" column and contact information to obtain agricultural air quality information or to schedule an on-site visit.
- Various articles published in industry periodicals with information on updates in air quality regulations, agricultural dust during high wind events and changes in the RABMP program. These publications reach over 5000 readers annually.

The RABMP program goal is to provide the regulated agricultural community with the necessary resources to achieve compliance with applicable air quality standards. Through innovation and enhanced outreach and education, the program is projecting increases in the number of individuals reached. This growth is due to joint on-site visits with ACT's Pesticide and Worker Protection program and outreach to Yuma and Pinal counties.

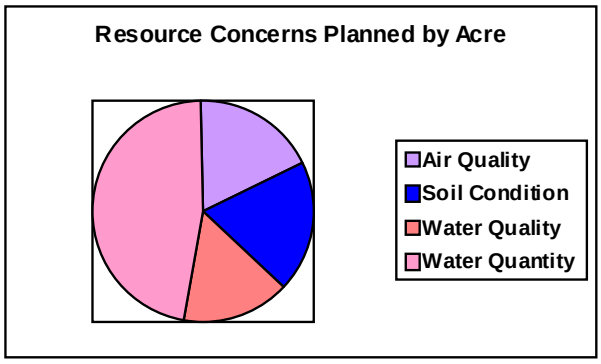
The air quality program has been actively participating in local air quality stakeholder's meetings such as:

- EPA Region IX Best Achievable Control Measures (BACM)
- ADEQ's Regional Haze and Natural Events meetings
- Maricopa County rule 310 public process and Air Quality Summit
- Maricopa County Association of Governments (MAG) Air Quality Technical Committee Meetings for the EPA 5% reduction of particulate matter (PM10) plan
- Pinal County PM10 reduction stakeholder group
- Ag BMP Governor's Committee booklet revision group**,** which has been working on a revised version of the Guide to Agricultural PM10 Best Management Practices booklet

Agricultural Conservation Education Program (ACEP)

Formerly - Water Quality Compliance Assistance – Comprehensive Nutrient Management Planning Program.

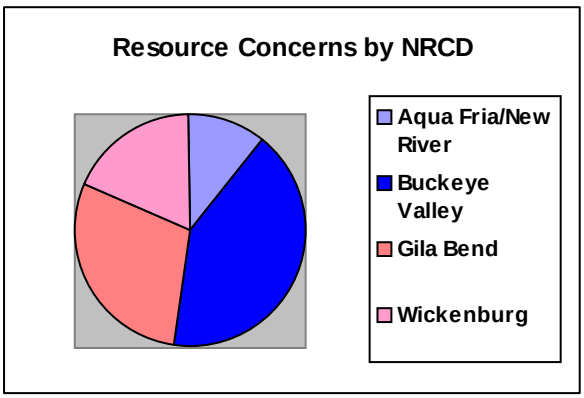
In September 2002, ACT entered into a cooperative agreement with the United States Department of Agriculture Natural Resources Conservation Service (NRCS) to create the Comprehensive Nutrient Management Plan (CNMP) Assistance Program. The goal of the program was to serve multiple organizations by addressing: ACT's goal of increased non-regulatory compliance assistance to the agricultural community, NRCS' effort to maintain and improve environmental resources, and compliance with the Arizona Department of Environmental Quality (ADEQ) Arizona Pollutant Discharge Elimination System Permit (AZPDES), which in turn meets the United States Environmental Protection Agency's (EPA) Clean Water Act (CWA) regulations. Through that agreement, the Certified Nutrient Management Planning Specialist (CNMPS) provided compliance assistance to Animal Feeding Operations (AFO) through the development of required Nutrient Management Plans (NMP).



Due to changes in the regulatory environment, beginning in 2005, the need for a focused CNMPS changed. NRCS and ADA decided to refocus the position on conservation and renamed it the

Agricultural Conservation Education Program (ACEP). The redesign of the position made it possible for the Program Coordinator to be able to continue to assist with varied types of Concentrated Animal Feeding Operation (CAFO) compliance and education while also assisting NRCS with the steadily increasing workload of managing the many Farm Bill programs. These programs include Environmental Quality Incentives Program (EQIP), Wildlife Habitat Incentive Program (WHIP) and Conservation Security Program (CSP). The broad scope of the position requires extensive continuing conservation training in the areas of soil, water, air, plants and animals with the influence of the human factor. This improved collaborative effort between NRCS and ADA helps to provide Arizona's agricultural producers with many more resources for compliance and educational assistance.

The NRCS assists the Natural Resource Conservation Districts (NRCD) with meeting their conservation goals. The Avondale Field Office supports the majority of Maricopa County and the four NRCD offices: Agua Fria/New River, Buckeye Valley, Gila Bend and Wickenburg. The resource concerns addressed with the 2008 EQIP contracts include Air Quality, Domestic Animals and Wildlife, Plant Condition, Soil Condition and/or Erosion and Water Quality and Quantity.



The ACEP Coordinator has continued to assist the NRCS Avondale field office with project and status reviews, soil loss evaluations and administrative management of EQIP contracts for fiscal year 2003, 2004, 2005, 2006 and 2007 totaling 64,765.00 acres. During the 2008 EQIP signup the ACEP Coordinator assisted with the application process, soil loss evaluations, rankings and the conservation planning for fourteen contracts totaling 11,699.20 acres.

Educational Outreach through the Multi-Agency CAFO Education Group

The CAFO Education Group is a joint project between producer organizations and state and federal agencies committed to providing education and compliance assistance to Arizona's Concentrated Animal Feeding Operations (CAFO). Members include representatives from the Arizona Cattle Growers Association, United Dairymen of Arizona (UDA), Arizona and Maricopa County Farm Bureaus, USDA - NRCS, EPA Region 9, several Natural Resource Conservation Districts, The University of Arizona Cooperative Extension, ADEQ and ADA. The ACEP coordinator chairs the CAFO Education Group and facilitates quarterly meetings.

Through the CAFO education group another new outreach opportunity has been developed. The ACEP coordinator utilized a previously existing relationship between the U.S. EPA and the Arizona Department of Agriculture to establish a Waste-to-Energy Workshop. The goal of this workshop was to discuss the issues around the Hassayampa Superfund Site, determine the steps necessary to produce renewable energy from agricultural waste to be used to assist in cleaning the site and identify the key participants in the project. Numerous agricultural producers, as well as agency and industry representatives attended. Currently, ACEP is assisting the EPA with the development of future steps and discussions with potential partners for the clean up activities.

During fiscal year 2008, the ACEP coordinator and the CAFO Education Group continued the development of a reference guide to help CAFO owners/operators in addressing regulatory and compliance needs as suggested by the UDA. The completed guide will be finalized and

distributed during fiscal year 2009. A web based version of the guide will also be added to the ADA website. The ACEP coordinator will manage and update this guide on a yearly basis. Other educational outreach provided through ACEP includes answering producer and consumer questions and providing information through letters, emails, faxes and phone calls.

Livestock & Crop Conservation Grant Program

The Livestock & Crop Conservation Grant Program (LCCGP) was created on September 18, 2003, by the Arizona State Legislature to assist ranchers and farmers with the implementation of conservation projects that ultimately provide for the preservation of open space. The Arizona Department of Agriculture is charged with developing, implementing and managing the program. The LCCGP is funded through the Proposition 303 Growing Smarter Statute that was passed by public referendum in 1998. Approximately $1.8 million is available in grant funds each year, through fiscal year 2011.

Per the grant program authorizing statute, A.R.S. §41-511.23 (G)(1), eligible applicants include individual landowners and grazing and agricultural lessees of state or federal lands that desire to implement conservation based management alternatives using livestock or crop production or reduction practices to provide wildlife habitat or other public benefits that preserve open space. Grant funds may be used for projects taking place on private, State and Federal land.

Currently, the grant program is run on a biennial grant cycle. During the two-year cycle, the LCCGP grant manual, grant guidelines, and rating criteria are subject to review and response by an advisory committee, as well as a public comment and hearing period. The second grant cycle was completed in fiscal year 2008 and preparations for the third grant cycle, to be held during fiscal year 2009, began.

During fiscal year 2008, ACT personnel worked to establish contracts with those who were awarded grant funding during the second grant cycle. The following types of projects were started, and many completed by grantees with funding from the fiscal year 2007 grant cycle:

- Utilization of funds as match/cost share to other conservation grants. (for example, if the applicant is participating in or plans to apply for a USDA NRCS EQIP grant which typically requires that the applicant provide 50% of the total project funding, LCCGP funds could be awarded for use as the 50% matching funds to the EQIP grant contract)

- On the Ground Conservation Projects (for example: riparian fencing, water resource development, grassland restoration funded through LCCGP without contributions from other grant programs)

- Livestock deferment funding in relation to a conservation practice or project. For example, if the applicant chooses to implement a conservation management practice such as prescribed burning or herbicide application that requires the deferment of livestock, the applicant may apply for LCCGP funds to cover the costs associated with deferring livestock.

The LCCGP coordinators have continued to promote the program, as well as administer the existing grant contracts from the fiscal year 2005 and 2007 grant cycles. Throughout the duration of the grant project, the LCCGP Coordinator provides administrative support and information,

answers questions and concerns and assists the grantee with reimbursement and funding advance requests. At the close of fiscal year 2008, thirty-eight of the fifty-six grantees from the fiscal year 2005 cycle and fifteen of the seventy grantees from the fiscal year 2007 cycle have completed their proposed grant projects.

Throughout fiscal year 2008, ACT personnel have participated in various stakeholder meetings and conferences to promote the grant program. Meetings include the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) State Technical Advisory Committee meetings, the Arizona Association of Conservation Districts annual meeting, the Arizona Cattlemen's Association annual meeting and the Arizona Farm Bureau annual meeting.

ACT personnel also began the monitoring process for projects funded by grant funds. Through on-site visits to observe the project progress, the coordinators are able to ensure that the funding is being utilized properly and provide additional technical services to grantees.

An LCCGP grantee in southeastern Arizona addressed water needs by installing additional water storage and drinkers to provide a water source for wildlife, as well as livestock.

Specialty Crop Block Grant Program

On December 21, 2004, the Specialty Crops Competitiveness Act of 2004 authorized the USDA to provide state assistance for specialty crops. Under Section 101 of the statute, the Secretary of Agriculture is directed to "make grants to States for each of the fiscal years 2005 through 2009 to be used by State departments of Agriculture solely to enhance the competitiveness of specialty crops." Specialty crops are defined as fruits, vegetables, tree nuts, dried fruits, and nursery crops (including floriculture). The value of U.S. specialty crops is equivalent to the combined value of the five directly subsidized program crops. However, sixty percent of all farmers do not raise program crops and do not receive direct subsidies. The purpose of this act is to help address this inequity between program crops and specialty crops.

The Arizona Department of Agriculture's Specialty Crop Block Grant Program (SCBGP) is administered by the ACT program. The 2008 Arizona Specialty Crop State Plan included eleven research, education, and marketing projects from outside entities and an internal department project to produce an Arizona Specialty Crop Reference Guide. In FY2008, Arizona's State Plan was approved by the U.S. Department of Agriculture's Agricultural Marketing Service (AMS), and a cooperative agreement was executed on October 19, 2007 between AMS and ADA. ACT personnel worked with awardees to execute contracts, and provide guidance and assistance with quarterly reports and quarterly reimbursements.

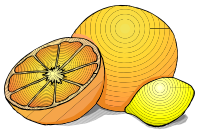
ACT's Intern, a graduate from ASU Polytechnic Morrison School of Agribusiness and Management,

researched and compiled information for the Specialty Crop Reference Guide which focuses on farmer's markets and U-pick farms' locations and hours of operation, educational opportunities in agriculture at Arizona institutes of learning, and career opportunities in agriculture. The guide has been approved by industry stakeholders, is now in the production stages, and is targeted to be ready for distribution to the public beginning the third week of September, 2008.

On March 5, 2008 AMS announced the availability of approximately $8,440,500.00 in federal fiscal year 2008 funding. Each state department of agriculture is eligible to receive a base grant of $100,000. In addition, AMS allocated the remainder of the grant funds based on the proportion of

the value of specialty crop production in the state. The 2008 base grant amount plus the value of production for Arizona is $159,294.43. ACT is currently working on a state plan for submission to AMS by the March 5, 2009 deadline.

Arizona Citrus Research Council



The Arizona Citrus Research Council was created by A.R.S. §3-468 to support the development of citrus research programs and projects within the Arizona citrus industry. The Council is funded by a per carton (1.5 cents) assessment paid by Arizona Citrus producers. Last year, the Arizona citrus industry produced more than 2.25 million cartons of grapefruits, lemons, oranges and tangerines. Council programs and projects target production, plant pest and disease control, efficient fertilization and irrigation techniques and variety development. The Council is comprised of five citrus producers appointed by the Governor:

- Two producers from district one (including Yuma County)
- One producers from district two (Maricopa, Pima and Pinal Counties)
- Two producers at large

In fiscal year 2008, the Council continued its work with research institutions to coordinate industry research needs. Council members approved nearly $56,000 in research grants.

Fiscal Year 2008 Financial Status - Arizona Citrus Research Council

Revenue	$28,283.70
Expenses	$98,493.30*

*These expenses include a $40,000 transfer of funds (sweep) by the Legislature to balance the FY 2008 State Budget. The council expended the remainder of its fund balance to protect it from further sweeps.

Arizona Iceberg Lettuce Research Council

The Arizona Iceberg Lettuce Research Council was created by A.R.S. §3-526 to conduct research for an Arizona industry that produces more than 22 million cartons of iceberg lettuce annually. The Council is funded by a per carton (.004 cents) assessment paid by Arizona iceberg lettuce producers. Council members are appointed by the Governor and consist of seven producers:

- Four producers from district one (including Yuma and La Paz Counties)
- Three producers at large

The council reviews and awards a wide range of research proposals on topics such as variety development, lettuce pest eradication, and for programs relating to food safety, production, harvesting, handling and transporting lettuce from fields to markets. During fiscal year 2008, the council approved over $166,000 in research grants. Some examples of research grant projects include the development of effective management tools for lettuce disease, insect management for desert lettuce, a preliminary assessment of microbial risk to lettuce from canine waste on canal banks, improved phosphorus fertilization practices of desert lettuce, and a survey of coliform and fecal bacteria in irrigation canal waters.

Fiscal Year 2008 Financial Status-Arizona Iceberg Lettuce Research Council

Revenue	$93,726.14
Expenses	$170,265.73*

*These expenses include a $41,400 transfer of funds (sweep) by the Legislature to balance the FY 2008 State Budget. The council expended the remainder of its fund balance to protect it from further sweeps. The council also approved a reduced assessment fee of .002 cents per carton for FY 2009 effective July 1, 2008.

Arizona Grain Research and Promotion Council

The Arizona Grain Research and Promotion Council was created by A.R.S. §3-581 through §3-594 and utilizes grower 'check-off funds' to aid in marketing wheat and barley, participate in research projects and other programs that assist in reducing freshwater consumption, develop new grain varieties and to improve grain production, harvesting and handling methods.

Research continues to be a top priority of the council by continuing support for the research activities of the University of Arizona. Research projects focus on the use of barley in a reduced tillage cotton systems, durum production practices, testing low input barley and wheat lines, small grains variety testing, herbicides for the control of littleseed canarygrass in wheat, as well as, labor assistance for the Arizona Meteorology Network. Annually, the council funds the small grain variety test trials used by producers to evaluate the varieties available. Approximately $39,000 was spent on research projects during fiscal year 2008.

The council supports the activities of the United States Wheat Associates, the export market development arm of the United States wheat industry. This support is important because more than half of Arizona's durum wheat is exported. In May of 2007 the council, along with US Wheat, co-hosted an Algerian trade team that visited Arizona to learn more about Desert Durum® and other grains grown in the state. The council collaborates with the California Wheat Commission to conduct an annual crop quality survey of the Desert Durum® crop in Arizona and Southern California and publishes the results for buyers around the world.

Fiscal Year 2008 Financial Status - Arizona Grain Research and Promotion Council

Revenue	$124,117.37
Expenses	$286,428.48*

* These expenses include an $80,000 transfer of funds (sweep) by the Legislature to balance the FY 2008 State Budget. The council expended most of its remaining fund balance to protect it from further sweeps.

Agricultural Employment Relations Board

The Agricultural Employment Relations Board (AERB) was created by A.R.S. §23-1386 in 1993 to provide a means to bargain collectively that is fair and equitable to agricultural employers, labor organizations and employees, to provide orderly election procedures, to resolve questions concerning representation of agricultural employees and to declare that certain acts are unfair labor practices that are prohibited and that are subject to control by the police power of this state. The board has an annual budget of $23,300.

The Board is comprised of seven members (and two alternates):

- Two agricultural employers/management
- Two organized agricultural labor representatives
- Three public members, from which a Chairman must be selected.

The Board meets at least once per year or as necessary. In May of 2007, an Unfair Labor Practice charge was filed with the Board. The charge was investigated and found to be unsubstantiated.

Arizona Agricultural Protection Commission

The Arizona Agricultural Protection Commission was established by the Arizona Agricultural Protection Act (AAPA), A.R.S. §3-3303, effective August 22, 2002. The commission's purpose is as follows: make recommendations to the director of the Department of Agriculture for the adoption of rules necessary for the commission to perform its duties, advise the department with respect to grants awarded and contracts entered into pursuant to the Arizona Agricultural Protection Act, solicit and accept donations including donations for the sole purpose of administering the Arizona Agricultural Protection Program, annually elect a Chair and Vice-Chair from among its members, advise the director and submit recommendations relating to the monitoring of agricultural easements established pursuant to the AAPA, and prepare an annual report of its activities.

The Arizona Agricultural Protection Act did not provide funding for the Commission. From October of 2003 to September of 2006, the ADA entered into annual agreements with the United States Department of Agriculture Natural Resources Conservation Service (USDA/NRCS) to provide funding for the administrative support to the Commission. The final agreement with USDA/NRCS expired on September 30, 2006.

The commission met several times throughout the fiscal year. At the request of the Governor's office, a Critical Issue in the amount of 1 million dollars was developed and included in the ADA's FY 2009 budget request. The Critical Issue was not funded. Although a dedicated funding source is not likely in the near future, the Commission will continue (with certain limitations) its mission to create a State funded program to provide for the purchase of conservation easements.

The State Agricultural Laboratory (SAL)

The State Agricultural Laboratory provides quality agricultural laboratory analysis, identification, certification, technical consultation and training services to various regulatory divisions of the Department and others as provided by law. To maintain the integrity of its test results, the Laboratory operates independently of the Department's regulatory divisions and operates under a stringent quality assurance program.

Summary of Laboratory Testing Functions	
Biology	
Entomology	Provides insect and other arthropod identifications to assist in preventing harmful pests from becoming established in Arizona and assists in certification of Arizona products.
Plant Pathology	Provides plant pathogen identifications to assist in preventing harmful disease organisms from becoming established in Arizona and assists in certification of Arizona products.
Botany	Provides plant identifications to assist in preventing harmful weeds from becoming established and/or spreading in Arizona.
Nematology	Provides nematode identifications to assist in preventing harmful pests from becoming established in Arizona and assists in product certification.
Malacology	Provides snail and slug identifications to assist in preventing the establishment and spread of agricultural pests species.
Seed Quality	Analyzes seeds sold in Arizona to assure consumers are getting label guaranteed quality.
Animal Disease	Analyzes animal blood and milk samples for the presence of the organism responsible for causing the disease brucellosis.
Dairy Product Quality	Analyzes dairy products from Arizona for presence of human disease causing organisms, drug residues and other milk quality factors in order to assist regulators in enforcing quality standards.
Food Safety & Meat Microbiology	Analyzes meat, ready to eat products and other commodities for presence of human disease-causing organisms in order to assist regulators in enforcing quality standards for safe food.
Chemistry	
Dairy Residue	Analyzes milk and other dairy products for the presence of pesticides and other harmful chemicals.
Pesticide Residue	Assists pesticide law enforcement officials through the forensic analysis of samples resulting from an investigation of alleged pesticide misuse.
Natural Toxin Residue	Tests human and animal feed products for the presence of naturally occurring chemicals capable of causing illness.
Pesticide Formulations	Provides analysis of commercially available pesticides to assure consumers are provided quality pesticide products.
Feed and Fertilizer Formulations	Performs testing of commercial feed and fertilizer product ingredients to determine compliance with label guarantees.
Food Allergens	Tests meat and ready to eat products for the presence of food allergens.
Prohibited Materials in Feeds	Tests feed products for materials banned from use in ruminant animal feed for the prevention of BSE.
Meat Quality	Tests meat and meat product samples to assist regulators in assuring proper economic labeling of products.

Homeland Security

The SAL continues to improve its capabilities to provide assistance to the state and nation in the event of a homeland security emergency. During the past year, with help from the Arizona Department of Emergency Management, the laboratory has continued upgrading its analytical

capacity by replacing nonfunctioning equipment and adding new analytical instrumentation. Federal, state and local governments are working together to produce a network of laboratories capable of responding to emergencies. SAL has worked hard during the past year to secure its place within the laboratory emergency response infrastructure. The biology and chemistry sections of the laboratory are both involved.

Western Plant Diagnostic Network (WPDN) – Part of the National Plant Diagnostic Network (NPDN), this network consists of laboratories performing plant pathogen, weed and insect pest identifications. Within Arizona, as an offshoot of this network all identified laboratories with plant pest detection capabilities have formed the Arizona Pest Diagnostic Network. The purpose of these groups is to form and maintain a network of diagnostic labs that will communicate information, mainly pest diagnoses and form a communication network to rapidly exchange information in the event of a significant exotic pest find.

Food Emergency Response Network (FERN) – FERN is a network of state and federal laboratories that are committed to analyzing food samples in the event of a biological, chemical, or radiological outbreak or terrorist attack in this country. SAL applied and was accepted into the FERN for both chemical and microbiological testing. Managers of both sections attended a regional planning meeting for laboratories within the western states.

DNA Testing Capabilities

During the fiscal year, the laboratory continued to expand its DNA analysis capabilities. Testing to confirm plant diseases, food pathogens and insect identifications was successfully conducted at the laboratory. The laboratory now has a comprehensive biochemistry laboratory, equipped to perform state of the art DNA testing utilizing polymerase chain reaction (PCR) and associated technology.

Quality Assurance Program

Quality assurance is an integral part of the Lab's analytical operations. It is the scrupulous attention to quality assurance standards that enables each of the laboratory's customers to act upon test results with utmost confidence.

Quality manuals define the laboratory policies, systems, programs, procedures and instructions to assure the quality of the test results. Standard operating procedures referenced in the quality manual detail laboratory processes, test methods, as well proper use and maintenance of equipment. These procedures ensure uniformity of work and the accuracy and reproducibility of test results.

Laboratory Audits

Internal laboratory audits are conducted to verify that the laboratory operations comply with the requirements of the quality system.

The dairy microbiology lab undergoes on-site laboratory audits that are conducted every three years by the U.S. Food and Drug Administration (FDA) Laboratory Evaluation Officers. These audits, combined with analyst participation in an annual proficiency sample program ensure the quality of the analyses conducted by the dairy microbiology laboratory.

USDA, Food Safety Inspection Service performs onsite audits of the meat chemistry laboratory activities every three years. These audits, combined with analyst participation in the required

bimonthly proficiency sample testing program help ensure the quality of the analyses conducted at the SAL.

Personnel Requirements

The laboratory ensures the competence of all who operate specific equipment, perform tests, evaluate results, and sign test reports. Personnel performing specific tasks are qualified on the basis of appropriate education, training, experience, demonstrated skills, and/or certifications.

Reference Standards and Reference Materials

Certified reference material and internal quality control using secondary reference materials are used regularly to ensure the accuracy of test results. The Arizona Department of Agriculture Collection of Arthropods houses one of the largest and most comprehensive ant collections in Arizona. It is part of an insect collection made up of over 20,000 individual specimens, representing more than 250 families of insects. This important reference collection is used by staff in identifying samples of beneficial and harmful insects, which are introduced or established in the state.

Proficiency Test Programs (PTPs)

Analytical performance is validated by participation in several proficiency test programs. PTPs provide unknown samples for analysis by the SAL and provide feedback as to how well the lab did in detecting and/or enumerating test results. Examples include: feed sample PTP by the American Association of Feed Control Officials (AAFCO); fertilizer sample PTP by McGruder's Fertilizer Check Sample Data Program; PTP for meat analyses by the USDA; dairy sample PTP by the Laboratory Proficiency and Evaluation Team of the Food and Drug Administration; brucellosis sera testing by the USDA; seed sample PTP by the Association of Official Seed Analysts; and mycotoxin sample PTP by the American Oil Chemists Society.

Biology

Biological Identification

The Biological Identification laboratory provides a number of services, including the identification of insects, other arthropods, nematodes, mollusks, plant pathogens and weeds, seed quality analyses and technical information about pests that allow the regulatory divisions to make informed decisions about permits, phytosanitary certification, quarantines and pest detection, eradication and exclusion measures.

Digital Imaging

The State Agricultural Laboratory was the first state department of agriculture to establish and develop a digital imaging system for remote identification of potential pests as part of a pest exclusion program. This was accomplished in partnership with the Plant Services Division and the Department's MIS group. With Digital Imaging (DI) systems in place at the State's ports of entry, high quality images of insects, seeds, diseased plants and other potential pests can be sent electronically for rapid analysis. In most cases a determination can be made in less than an hour. This shorter time span reduces the holdup of a commercial load from days to hours.

The Lab's DI system also has been used for preparing training materials for the Department's inspectors. In addition it has been used to send images to experts around the world, thus expanding the analytical ability of the Laboratory's Biological Identification staff.

Seed Analysis Benefits Arizona's Farmers and Others

Seed analysts in the Biology Section conduct analysis of seed purity, germination rate, and weed seed content to benefit Arizona's farmers, landscapers, homeowners, golf courses and seed export companies. During FY2008, 988 analyses were completed on seed samples to provide assurance that the seed label matches its guaranteed performance when planted and does not contain excess harmful weeds. Seed analysts are certified by the Association of Official Seed Analysts.

Identifications

For FY2008 the Biology Section of the lab provided 7,605 identifications on specimen submissions. This included 36 botany identifications; 5,921 entomology identifications; 617 nematode identifications; and 822 plant pathology identifications.

Technical Assistance

The lab provides technical assistance to Department personnel and others in Phytosanitary Certifications, Pest Importation Permits, and hands-on training in sampling technique, sample submission and field recognition of pests and plant diseases.

Export

To facilitate exports of various agricultural commodities, laboratory staff trains Department personnel in field inspection, collection and detection of plant pests. Export requirements require certificates that indicate plant health. The list of target diseases is dynamic and fluctuates in response to biological, economic and political factors abroad. Tests performed and information provided by plant pathology and entomology staff is vital in certifying Arizona-produced commodities for domestic and foreign markets.

Dairy Product Quality

The U.S. Food and Drug Administration (FDA) certifies the dairy microbiology lab and individual analysts to perform testing on dairy products, dairy product containers, and environmental dairy water samples to allow export of Arizona's milk and milk products to other states. On-site laboratory surveys, conducted every three years by FDA personnel as well as analyst participation in an annual proficiency sample program, ensure the quality of the analyses conducted by the dairy microbiology laboratory. Tests conducted include bacteriological analyses, enzyme activity for proper pasteurization of dairy products, antibiotic residues, and other indicators of milk safety and quality. In FY2008, the laboratory performed 7,692 microbiological and 106 antibiotic residue analyses on Arizona-produced raw milk, pasteurized dairy products, dairy product containers, and environmental dairy water samples for the Department's Animal Services Division.

Food Safety

The laboratory participates in the Department's development of a Food Safety and Quality Assurance Program by testing agricultural commodities for food-borne pathogens in the Food Safety lab. Raw meat, ready-to-eat products, and animal carcass swab samples are tested in support of the State's Meat and Poultry Inspection Program which is a cooperative program of the U. S. Department of Agriculture Food Safety and Inspection Service program. A total of 257 tests for food-borne pathogens were performed in FY2008.

Animal Disease Detection

The Animal Disease laboratory tests animal blood and raw milk for the bacteria responsible for causing brucellosis, a severe reproductive disease in cattle and other animals. In humans the disease is known as undulant fever. Brucellosis may be transmitted from animals to humans through non-pasteurized milk or milk products.
Brucellosis is a disease that decreases reproductive efficiency, and if present, can seriously affect the profitability of domestic livestock producers and exotic zoo animal producers. Since the 1940s, the USDA has sought to eradicate brucellosis, resulting in the current Cooperative State Federal Brucellosis Eradication Program.

States are designated brucellosis free when none of their cattle or bison is found to be infected for 12 consecutive months under an active surveillance program. Arizona has been brucellosis-free since 1987. At slaughter, all potentially reproductive cattle and bison two years of age or older are tested.

Laboratory analysts are certified by the United States Department of Agriculture National Veterinary Services Laboratory. The Animal Disease laboratory analyzed a total of 9,003 blood and milk samples from domestic and exotic animals for the Brucellosis Eradication Program in FY2008. In addition, laboratory technicians perform blood sample collection from cattle at an Arizona slaughter facility. These samples are shipped to a State-Federal laboratory in Lubbock, Texas for analysis. A record total of 200,237 cattle blood samples were collected and shipped to the Lubbock laboratory for testing in FY2008.

Chemistry

Our Customers

During FY2008, the Lab's Chemistry Section continued providing regulatory pesticide residue analyses to Arizona's pesticide law enforcement agencies including:

- Department's Pesticide Compliance and Worker Safety Program
- Department's Animal Products Food Safety and Quality Inspection Program
- Department's Non-Food Product Quality Assurance Program
- Structural Pest Control Commission
- Salt River Pima Maricopa Indian Community
- Gila River Indian Community
- Colorado River Indian Tribe
- Navajo Nation

In addition, technical and training support for tasks such as sample collection and preservation, chain-of-custody use and documentation; test selection; results interpretation; sampling plan development and chemical safety also are services provided to our customers.

Natural Toxins

Cottonseed - A Valuable Feed Commodity

The Natural Toxins laboratory plays a major role in the certification of three private laboratories to provide the industry with lab services, allowing for the safe use of cottonseed and cottonseed products as a feed substance. Cottonseed is commonly fed to Arizona's dairy cows. A natural toxin called aflatoxin can contaminate cottonseed. Arizona's dairy producers do not want to buy contaminated seed or feed it to their dairy herds.

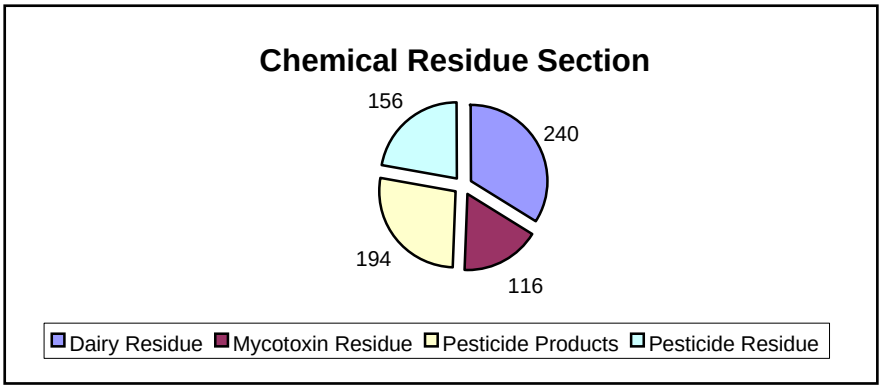
Protection for Milk

To protect Arizona's milk drinkers, a comprehensive system was developed to detect and prevent contaminated milk from reaching the market place. The laboratory certifications are an integral part of this protection. Cottonseed products must be stored, sampled by a certified sampler and tested by a certified laboratory in strict accordance with Arizona Statute to protect the dairy producers from obtaining contaminated feeds. To further protect Arizona's consumers, milk products also are tested both by industry and SAL.

Animal Feed Protection

The laboratory also performs analyses for the presence of natural toxin residues in human food, animal feeds and pet food products. This includes chemicals such as aflatoxin (potent cancer-causing agent in humans and animals), fumonisin (causes death and illness in horses and hogs), and vomitoxin (causes serious illness in dogs). As these compounds are naturally produced through fungal activity, the regulatory focus is shifted into the detection and prevention of contaminated products entering into the human and animal food chain. This testing is completed for the Department's regulatory programs.

Chemical Residue



Threat of DDT Residues in Milk

Pesticide residue testing also is conducted for the Department's Food Safety and Quality Assurance program. The primary pesticide of concern in milk products continues to be dichlorodiphenyltrichloroethane or DDT. The use of DDT was banned in 1971 due to environmental and possible health concerns. Despite 37 years of nonuse, DDT continues to have a presence in Arizona's environment. Testing for this pesticide supports the Department's regulatory role in the preventing significant levels of contamination from reaching Arizona's dairy product consumers.

Forensic Testing

The Chemistry Section also tests samples collected during investigations of off-target spraying of pesticides during agricultural use, incorrect application of pesticides to homes for the prevention of termite infestations or insect control, illegal discharge of pesticides into the environment, or failure to take necessary actions to protect industry workers. Sample types received include water, soil, produce, foliage, animal tissues, air, clothing and surface swabs. Complicating the variety of samples are the estimated 11,602 pesticide products registered for use in Arizona. Analysis of these forensic samples requires advanced scientific tools and experience.

Consumer Protection

The expertise of the Lab's personnel with the chemistry of pesticides is further used to protect Arizona's consumers and industry through the provision of analysis of home-use, commercial and agricultural pesticide products. The Department collects samples each year from the consumer and industrial market place. Chemists then perform analyses to determine whether the content and quality of the active ingredients are correctly displayed on the product label. This regulation not only protects the end-user from potential financial losses, but it also plays a key role in protecting pesticide applicators and farm workers against harmful exposure.

Traditional Chemistry

Feed and Fertilizer Quality

This portion of the chemistry laboratory analyzes commercial feed and fertilizer products to determine whether the amount of ingredients guaranteed on the label are accurate. This ensures that consumers receive agricultural products that meet the label guaranteed quality. For example, a fertilizer may have a guarantee of 10-20-5 which indicated the product must contain 10% nitrogen, 20% phosphorous and 5% potassium and the lab would run tests for all three ingredients. Similarly, a feed product may be guaranteed for protein, calcium and phosphorous, requiring multiple testing as well. During FY2008, 1,073 analyses were performed on 470 fertilizer products and 518 tests were conducted on 241 feed samples collected in the marketplace.

Meat Product Quality

Department Meat and Poultry Inspectors collect samples of raw and processed meat and submit them to the laboratory for analysis of their key economic ingredients: protein, fat, moisture,

added water, and salt. By performing 132 analyses during FY2008, the laboratory assisted the Department in ensuring the public is receiving meat products of stated economic value.

Environmental Services Division (ESD)

The Arizona Department of Agriculture Environmental Services Division is responsible for protecting public health, agricultural workers, consumers and the environment. The Environmental Services Division is made up of three sections. The Compliance section protects the public, agricultural workers and pesticide handlers employed in agribusiness through field inspections and complaint follow-up to monitor proper use of crop protection products and enforcing compliance with environmental laws and rules. They also review labels and inspect marketplaces, as well as take samples of feed, fertilizer, pesticide and seed for analysis at the State Agricultural Laboratory to ensure product quality for consumers. The Licensing section provides licensing for much of the agency ensuring quality customer service and appropriate cash handling. The Office of Special Investigation ensures effective investigation of agricultural crimes relating to department statutory authorities.

Staff Allocations

The Environmental Services Division had 29 full-time employee positions as of June 30, 2008. Thirteen field inspectors are responsible for sampling various nonfood products, ensuring compliance with pesticide, feed, fertilizer, seed and worker protection statutes and rules, and conducting criminal investigations.

Centralized Licensing and Registration

The centralized Licensing Section processes a majority of licenses issued by the department. Office hours are from 8:00 a.m. to 5:00 p.m. Many of the needed forms for licensure application can be accessed on our home page at www.azda.gov.

The Department of Agriculture is committed to providing excellent customer service on a timely basis. This continues to be proven out by the many customer service survey cards stating what a pleasant experience it was and how great the employees were in treating them so professionally.

License Fees Protect Industry and Consumers

The Non-Food Quality protection program is funded with no general funds. The funding comes from legislative appropriation of monies collected from: an annual $10 commercial feed license fee and a $0.20 per ton commercial feed inspection fee; an annual $125 fertilizer license fee, a $50 per brand and grade specialty fertilizer registration fee and a $0.25 per ton fertilizer inspection fee; a $100 per product pesticide registration fee; and, an annual seed license fee of $50 for dealers and $100 for labelers, which was an increase of $25 and $60 respectively. Funding from this program area also is utilized by the State Agricultural Lab for personnel costs.

One hundred dollars of the fee paid for each fertilizer license and $75 of the pesticide registration fee help support the Arizona Water Quality Assurance Revolving Fund (WQARF), which is administered by the Arizona Department of Environmental Quality (ADEQ), to be used for ground water cleanup projects. In 2008, $981,600 in fees was collected for the WQARF: $39,200 in fertilizer fees and $942,400 in pesticide registration fees.

Fertilizer Tonnage FY 2008			
Dry	Bulk	Liquid	Total
187,384	26,367	233,880	447,631

Feed Tonnage FY 2008	**Total**
	1,626,669

Certification Requires Continuing Education

The department's continuing education efforts keep users of restricted use pesticides aware of current laws, rules and the latest integrated pest management techniques to help protect the environment through efficient utilization of pesticides.

Individuals holding commercial certification are required to earn six hours continuing education each year. Those holding private certification are required to earn three hours each year. Private certification enables individuals to apply restricted use pesticides on land owned or rented by their employer or themselves. Commercial certification allows application on any agricultural property. Individuals holding pest control advisor licenses are required to earn fifteen continuing education credit hours annually.

During FY 2008, many training sessions were held that provided credential holders the opportunity to earn credits. Total credit hours granted to educational programs for continuing education totaled 1,351. The number of training sessions which were approved for the year was 379. The University of Arizona Cooperative Extension Service sponsored 40 of these training sessions and 291 were sponsored by companies in the private sector.

Testing Center

Tests administered by the Environmental Services Division include milk haulers, cottonseed, and a myriad for pesticide-use. Tests are administered in Phoenix, Tucson, and Somerton. Appointments are always recommended. In the outlying offices, this is arranged through contacting a local inspector.

Exams Administered in FY 2008

TYPE OF EXAM	Total Exams	Number Passed	Number Failed	Passing Rate
Aerial Applicator (AAP)	3	3	0	100%
Commercial Applicator (PUC)	204	171	33	84%
Custom Applicator (CAA)	2	2	0	100%
Pest Control Advisor (PCA)	51	42	9	82%
Private Applicator (PUP)	83	78	5	94%
Fumigant Endorsement	4	3	1	75%
Milk Sampler & Hauler	81	67	14	83%
Cottonseed Sampler	0	0	0	N/A
TOTALS	**427**	**365**	**62**	**86%**

The following chart represents the total number of licenses, permits, and certificates issued by the Licensing Section during FY 2008:

Licenses and Registrations Issued in FY 2008	
Pesticide - Total Pesticides Registered	12,095
Agriculture Use Pesticides	2,414
Non-Agricultural Use Pesticides	9,681
Fertilizer - Licensed Fertilizer Companies	316
Specialty Fertilizers	2,963
Feed - Licensed Feed Companies	489
Seed Dealers	1,210
Seed Labelers	178
Dairy/Milk Industry Licenses	453
Aquaculture Licenses	57
Egg & Egg Products	99
Meat Industry Licenses	224
Livestock Brand Certificates	1,932
Equine Certificates Issued	317
Certificates of Free Sale	74
Products Certified for Free Sale	2,641

Native Plant Program

No. of Permits	Saguaro Tags	Regular Tags	Green Seals	Total Fees
1396	**7778**	**15216**	**62508**	**$102,497**

The following chart represents the total number of pesticide use related licenses/certifications issued during the 2008 fiscal year. Other licenses that expire on December 31 are aquaculture, meat, dairy, and pesticides. This brings over 12,000 licenses up for renewal during the same time of the year. Additionally, feed and fertilizer tonnage reports are due for the fourth quarter of 2008. Budget cuts and a hiring freeze have put the Licensing Section into a situation never before faced by the section. The section has three vacancies that were not filled due to the hiring freeze. There is concern we will be unable to deliver the level of customer service and turn-around time that our customers have become accustomed to. Even further concern is if the trend continues we will likely not be able to meet statutory time frames. That means the turn-around time will lengthen and fees will be returned due to missed time-frames.

Pesticide Use Related Credential Summary FY 2008	
Grower Permits (PGP)	916
Pesticide Sellers (PSP)	108
Ag Aircraft Pilots (AAP)	34
Custom Applicators (CAA)	48
Equipment Tags	461
Pest Control Advisors (PCA)	149
Private Applicators (PUP)	397
Commercial Applicators (PUC)	299
Pesticide Responsible Individual (PRI)	18

Pesticide Compliance and Worker Safety

The Compliance Section has 10 inspector positions, five Industrial Hygienists and five Pesticide Control Inspectors, who conduct a number of different types of health and safety inspections at commercial and private businesses that apply pesticides in agricultural settings. This includes pesticide dealers and pesticide production establishments to ensure compliance with state and federal agricultural worker safety laws and pesticide use regulations. Inspectors enforce agricultural safety and pesticide use laws and make recommendations of corrective procedures when appropriate. During inspections and through outreach, inspectors provide consultation to agricultural employees and pesticide handlers and workers to increase their knowledge and understanding of pesticide safety and agricultural safety laws.

Misuse is taken seriously

The Department observes pesticide applications and activities related to mixing and loading pesticides, storage and disposal of pesticides and empty pesticide container disposal to ensure safe pesticide use. Complaints alleging pesticide misuses are promptly and thoroughly investigated. Once an investigation is complete, a recommended disposition is prepared. No recommended disposition can take place without a review and approval by the Associate Director, the Director and an attorney from the Office of the Arizona Attorney General. If all reviewing parties agree a violation of the pesticide laws occurred, a citation can be issued. Negligent parties may request a hearing with the Office of Administrative Hearings or pay a penalty established by law for their actions.

Report pesticide misuse

The ESD has a long standing Pesticide Emergency Hotline at 1-800-423-8876 where pesticide misuse can be reported. This number is also part of the required worker safety training requirements so workers and handlers have access to easily report worker protection standard (WPS) violations. This number is monitored regularly, including weekends and holidays during the summer months. This line is also used by pesticide applicators to request an inspector to monitor an application when spraying in sensitive areas where agricultural and urban areas interface. This is the second year in which no formally designated Pesticide Management Areas occur. These areas historically occur where numerous complaints are filed – normally in new ag/urban interface locations. Complaints may also be reported by calling offices located in Phoenix, Tucson and Yuma/Somerton.

Restricted Use Pesticides

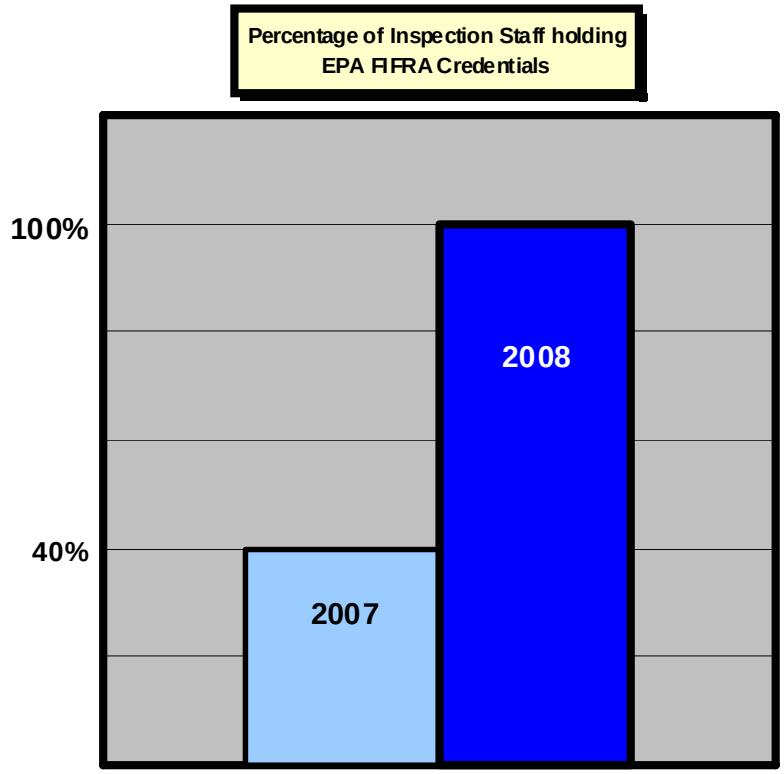
Inspections are conducted at pesticide marketplaces to ensure that pesticides are registered with the state and the Environmental Protection Agency. Pesticides that have been manufactured in other countries and illegally imported into Arizona are not subject to the same strict quality control or child-safe packaging measures as pesticides manufactured in the United States and may pose health risks to people, animals, and the environment. Inspections at pesticide dealers and on agricultural establishments ensure that pesticides classified as *restricted use* are sold and used only by persons who have proven their competency through certification to handle the associated risks. This also ensures that agricultural insecticides do not find their way into urban settings for residential use, which can be deadly.

Agricultural Worker Safety

The worker safety program and regulations are designed to protect agricultural workers and pesticide handlers employed on agricultural establishments, which include farms, forests, nurseries, greenhouses and pesticide handling establishments. Establishments applying and using agricultural use pesticides must comply with the Arizona and EPA's Worker Protection Standard (WPS).

If agricultural-use pesticides are applied on an agricultural establishment, under the WPS the establishment must train workers and handlers of agriculture pesticides, provide notification of pesticide applications, provide required personal protective equipment and decontamination supplies, take the employee to the doctor if they claim illness due to pesticides and provide a central location where information on pesticides used can be obtained.

The Department's worker safety efforts predate federal standards and continue to be a benchmark for other states. The Department compliments WPS inspections by remaining in contact with the agricultural worker community, to maintain a level of trust and credibility.



EPA FIFRA [**E**nvironmental **P**rotection **A**gency - **F**ederal **I**nsecticide, **F**ungicide, and **R**odenticide **A**ct] **provides the basis for regulation, of the sale, distribution and use of pesticides in the U.S.**

Individuals applying pesticides in Arizona must do so in a manner not only consistent with Arizona state laws, but also in accordance with federal laws.

The ADA is the state lead agency for pesticide regulation in Arizona. ESD inspection staff is federally credentialed by the EPA so that we can perform investigations on their behalf.

EPA FIFRA training involves both academic studies and considerable on-the-job training experience - both as a trainee observer and as a lead inspector.

Using EPA FIFRA Credentials, Compliance staff will not only routinely inspect suspected violations of federal laws, but also perform inspections at the request of EPA. Under such situations, case file copies are forwarded to EPA who will in turn determine if any federal action is warranted.

COMMUNITY / INDUSTRY TRAINING / OUTREACH

Each year inspection staff communicate the Worker Safety message by participating in local events attended by citizens, agriculture management, farm workers, and their families. An assortment of publications in both Spanish and English are made readily available without cost.

Dia Del Campesino, Feria de Informacion y Salud. San Luis, AZ - December 1, 2007

Yuma County Agricultural Tour. Yuma, AZ - December 6&7, 2007

Regulatory Standards or Enforcement of Contractual Obligations of Employers of Temporary Agricultural Workers (H-2A) and U.S. Workers in Corresponding Employment. Somerton, AZ - December 11, 2007

The Arizona Interagency Farm Workers Coalition Conference. Rio Rico, AZ - April 8-10, 2008

2008 Southwest Ag Summit. Yuma, AZ - March 12&13, 2008

Train The Trainer [TTT] Workshops

The Worker Protection TTT program trains and qualifies individuals to be trainers of field workers and pesticide handlers in regards to pesticide safety. The program is conducted by Environmental Services Division Compliance Section Industrial Hygienist staff, in cooperation with Agricultural Consultation & Training (ACT). Spanish and English sessions are held in state-wide agricultural regions for the convenience of the participants. This year four courses were joint AZ / CA / Tribal TTT programs. These courses were coordinated by ACT. Presenters from Mexico and several AZ tribes participated in these seminars. This state financial year 210 participants satisfactorily passed the certification test. Qualified trainers in the state were issued cards to train 8,453 agricultural workers and 6,289 pesticide handlers.

TTT Workshop (Spanish) - Parker, AZ - August 8, 2007. 63.4% of 41 attendees passed the exam.

TTT Workshop (English) - Parker, AZ - August 9, 2007. 82.1% of 28 attendees passed the exam.

Joint Arizona/California/Tribal & Mexico TTT Workshop (English) - San Marcos, CA - October 23-24, 2007. **WAS CANCELLED DUE TO WILD FIRES**

Joint Arizona/California/Tribal & Mexico TTT Workshop (Spanish) - San Marcos, CA - October 25-26, 2007. 66% of the 15 attendees passed the exam.

TTT Workshop (Spanish) - Somerton, AZ - November 14, 2007. 83% of 23 attendees passed the exam.

TTT Workshop (English) - Somerton, AZ - November 15, 2007. 100% of 24 attendees passed the exam.

TTT Workshop (English) - Chino Valley, AZ - March 28, 2008. 100% of 21 attendees passed the exam.

Joint Arizona / California Tribal TTT Workshop (Spanish) - Yuma, AZ - April 8 & 9, 2008. 95% of the 22 attendees that took the exam, passed.

Joint Arizona / California Tribal TTT Workshop (English) - Yuma, AZ - April 10 & 11, 2008. 100% of the 19 attendees passed the exam.

TTT Workshop (Spanish) - Maricopa, AZ - May 28, 2008. 86% of 14 attendees passed the exam.

TTT Workshop (English) - Maricopa, AZ - May 29, 2008. 100% of 42 attendees passed the exam.

General Training Programs & Workshops

Management and inspection staff from the Environmental Services Division conduct a wide spectrum of training programs throughout the year. Many are conducted with Agricultural Consultation & Training.

Recertification & Training Courses - Annual Recertification & Training Courses were held across the state. Pest Control Advisors, Certified Applicators and Responsible Parties for Pesticide Sellers were able to obtain six hours Continuing Education Units for attending the full day course. November 26, 28-30, 2007

Conference and Workshop Attendance

The Compliance Section oversees two field programs - Non-Food Product Quality Assurance: [Pesticide, Feed, Fertilizer, and Seed]; Pesticide Compliance and Worker Safety: [Worker Protection & Safety (WPS), Pesticide Compliance (USE)]. Both programs are a complex tapestry of issues, including ever changing enforcement laws and regulations, new / improved inspection procedures, and advanced technologies for documenting inspection activities. Since the Section deals with multiple issues within the six areas, demands on inspection staff knowledge and resources become a major challenge. Between the training of new staff and keeping abreast of the latest developments associated with each area, all staff are required to regularly attend educational / informative conferences and workshops. The Compliance Manager was chosen as the EPA Region IX representative to SFIREG. SFIREG is the national organization that works closely with EPA to provide state input.

Pesticide Regulatory Education Program. Portland, OR - Sept. 23-29, 2007

The Association of American Feed Control Officials (AAFCO). San Antonio, TX - January 28-31, 2008

The Association of American Seed Control Officials. Tampa, FL - February 19-22, 2008

FDA State Feed Contractors Meeting. Kansas City, Mo - February 27&28, 2008

2008 Western Region Pesticide Meeting. Scottsdale, AZ - April 20-24, 2008

2008 Desert Agricultural Conference. Casa Grande, AZ - May 7&8, 2008

State FIFRA Issues Research & Evaluation Group. Arlington, VA - June 23&24, 2008

Pesticide Inspector Residential Training. Savannah, GA - Aug. 26-31, 2007

Council on Licensure, Enforcement, and Regulation Training. Atlanta, GA - September 10-13, 2007

AAFCO Feed Inspectors Seminar. Lexington, KY - October 9-11, 2007

Basic Inspector Training Seminar. Salt Lake City, UT - October 23-26, 2007

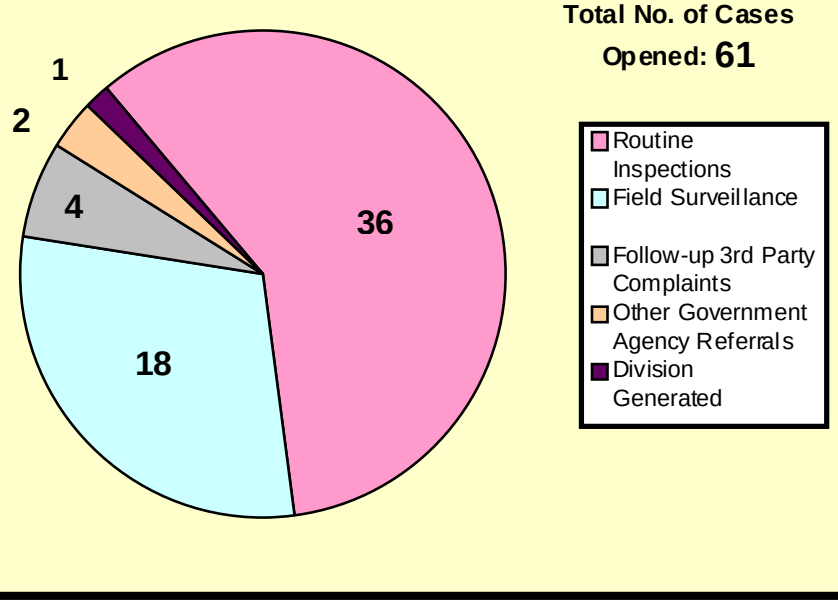
Council on Licensure, Enforcement, and Regulation Training. Phoenix, AZ - October 22-24, 2007

EPA Region IX Pesticide Inspector Workshop. San Francisco, CA - April 15-17, 2008

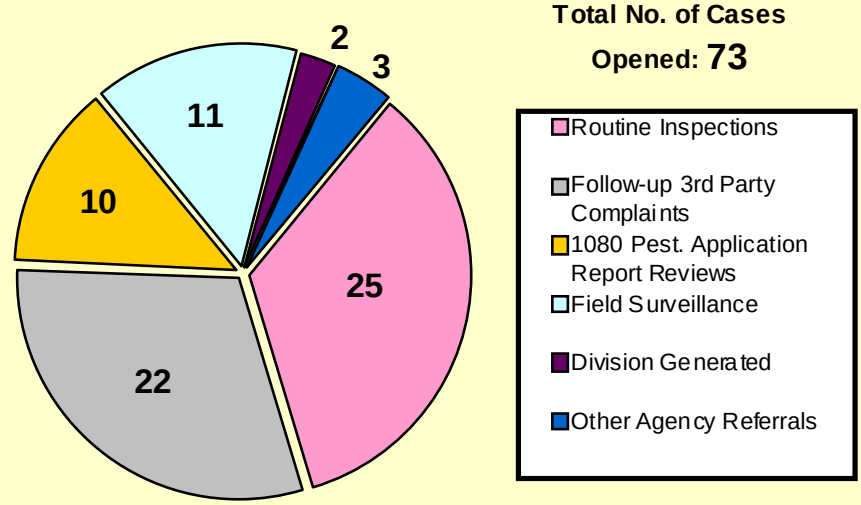
Pesticide Inspector Residential Training. Asheville, NC - April 20-24, 2008

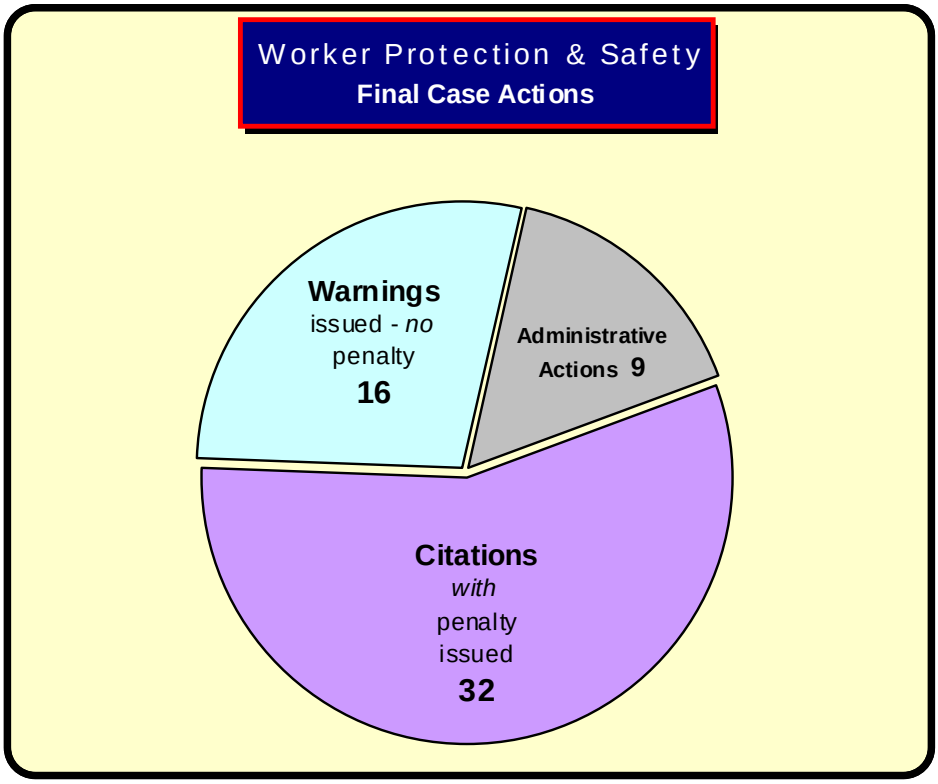
Pesticide Applicator Professionals Association. Holtville, CA - May 1-6, 2008

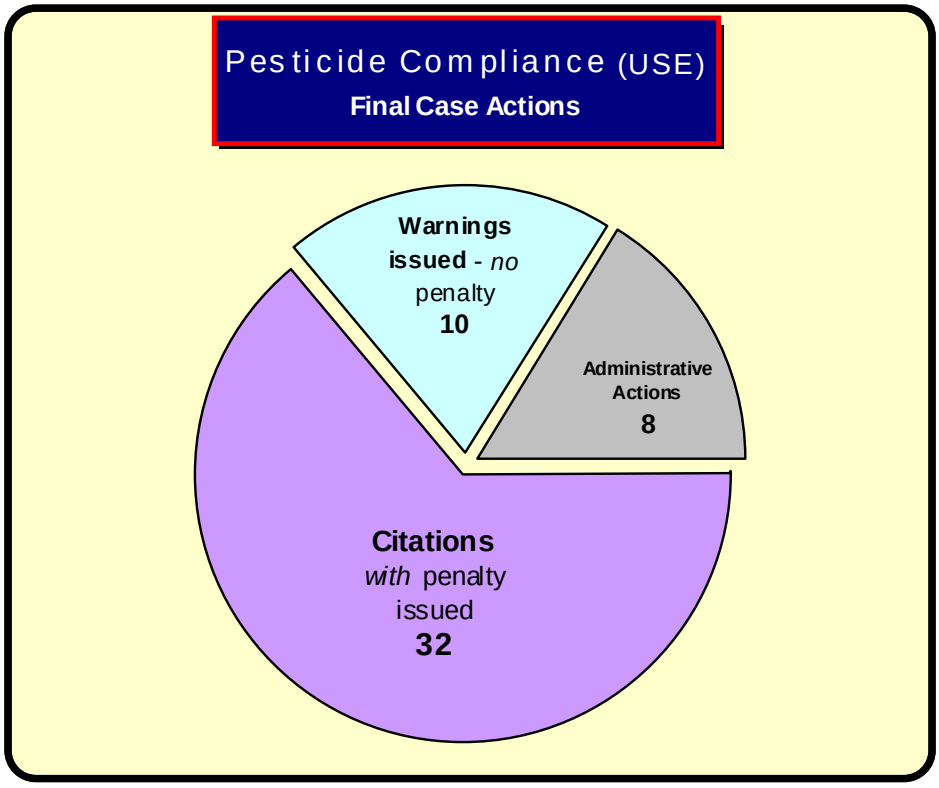
Worker Protection & Safety
Origin of Investigation Cases

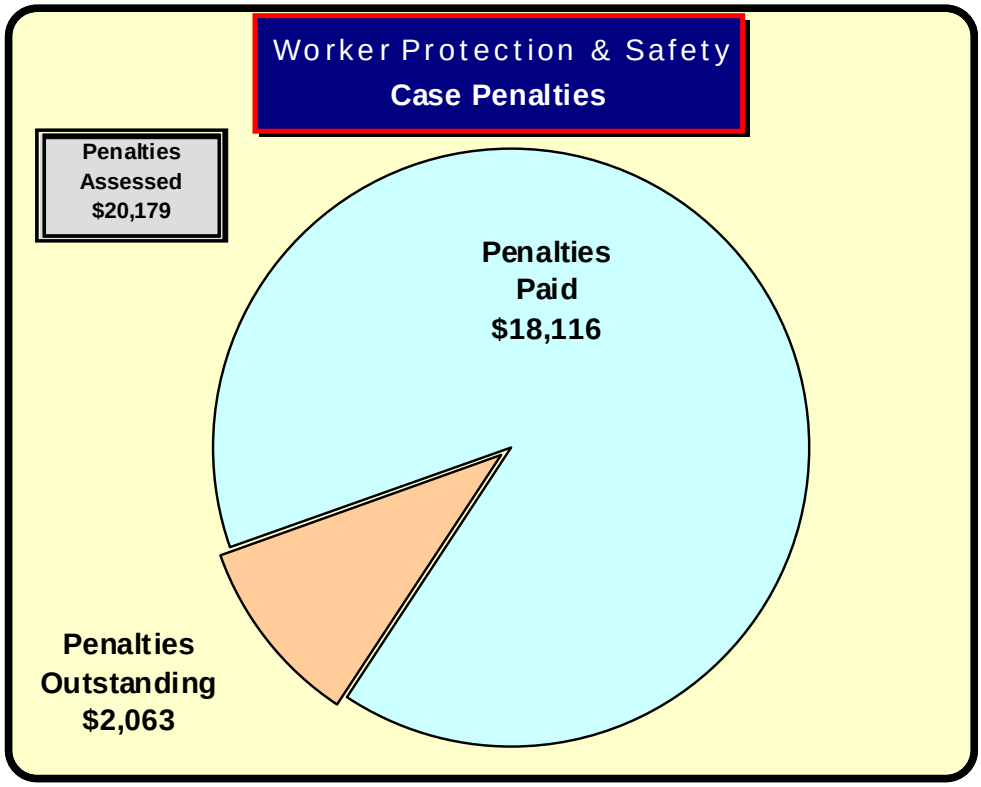


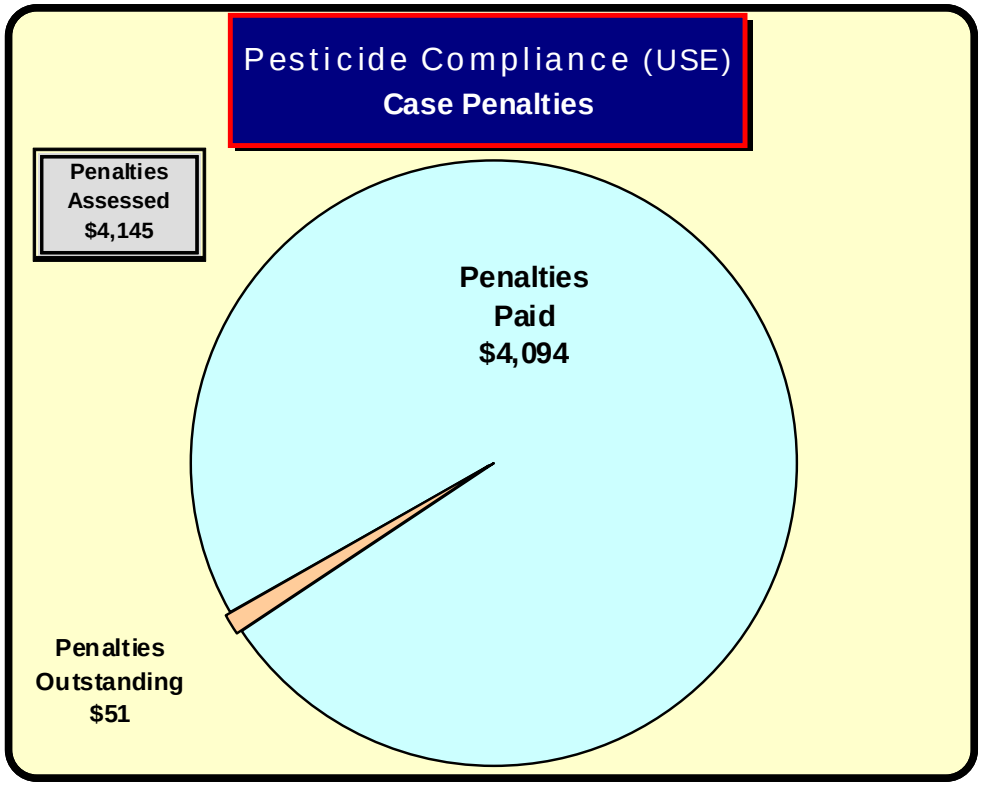
Pesticide Control (USE)
Origin of Investigation Cases




Worker Protection & Safety
Final Case Actions
Warnings
issued - no
penalty
16
Administrative
Actions 9
Citations
with
penalty
issued
32


Pesticide Compliance (USE)
Final Case Actions
Warnings
issued - no
penalty
10
Administrative
Actions
8
Citations
with penalty
issued
32


Worker Protection & Safety
Case Penalties
Penalties Assessed $20,179
Penalties Paid $18,116
Penalties Outstanding $2,063


Pesticide Compliance (USE)
Case Penalties
Penalties Assessed $4,145
Penalties Paid $4,094
Penalties Outstanding $51

Worker Safety & Pesticide Use

Complaints Received or Violations Observed

	Complaints / Violations	Number of Cases
Pesticide Control (USE)	Restricted Use Pesticide Recordkeeping	4
	Operating without a Regulated Grower Permit (PGP)	8
	Pesticide Misuse	13
	Pesticide Storage / Disposal	10
	Pesticide Exposure resulting from drift / overspray	5
	Noise / Over-flight	2
	Drift / Overspray	5
	Health Effects	4
	Use of Fumigant without certification	2
	Crop Damage	2
	Illegal Pesticide Sales	1
	Animal / Bird Kill	4
	Use of Unregistered Pesticide	2
	Unlicensed Pesticide Seller	1
	1080 Pesticide Application Reports	6
	Pesticide Concerns	2
	Water Contamination	1
	Unlicensed Pest Control Advisor (PCA)	1
Worker Safety	Multiple WPS Violations	29
	Pesticide Safety Training	13
	Central Posting	2
	Pesticide Application List	3
	Pesticide Exposure / Violation of Restricted Entry Interval	2
	Personal Protective Equipment missing or not used	5
	Exposure	4
	Trainer operating w/o WPS Training Certificate	2
	Decontamination	1

Complaint and Inspection Violation Categories

Worker Safety & Pesticide Use

	Incidents	Number of Incidents
Worker Safety	Failure to Verify Training	25
	Application List Not Provided / Posted / Incomplete	21
	Failure to Train	14
	Medical Emergency Information Not Posted / Missing / Incomplete	9
	Operating Without a Valid License	9
	Safety Poster Not Posted / Illegible / Inaccessible	8
	Central Posting - Missing / Incomplete / Inaccessible	6
	Decontamination Site Not Provided	6
	Label Violation - Storage / Disposal / Transport / General Misuse	4
	Safety Equipment Not Provided	3
	Violation of Restricted Entry Interval	3
	Unsafe Environment	3
	Agriculture Safety / Multiple WPS Violations	1
Pesticide USE	Record Keeping	18
	Operating Without a Valid License	16
	Label Violation	13
	Illegal Sales	11
	Container Disposal / Storage	10
	Miscellaneous	3
	Drift / Overspray	2
	Illegal Application	1

Non-Food Quality Enforcement Actions

FERTILIZER	Number
TOTAL NUMBER OF CASES OPENED	191
Follow-up third-party complaints	0
Routine Inspections	191
NUMBER OF FERTILIZER PENALTIES ISSUED	32
Total amount of penalties issued	$27,756
Total amount of penalties paid to date	$8,018
CEASE & DESIST ORDERS ISSUED	308
Quality Assurance Analysis Failures	74
Unlicensed Commercial Fertilizer Company	64
Unregistered Specialty Fertilizer	164
Both Unlicensed Company & Unregistered Products	3
False / Misleading Statements	3
WARNINGS / NOTICE OF VIOLATIONS ISSUED	259
Quality Assurance Analysis Failures	48
Unlicensed Commercial Fertilizer Company	65
Unregistered Specialty Fertilizer	143
Both Unlicensed Company & Unregistered Products	3

COMMERCIAL FEED	Number
TOTAL NUMBER OF CASES OPENED	219
Follow-up third-party complaints	7
Routine Inspections	210
Referrals	2
CEASE & DESIST ORDERS ISSUED	276
Quality Assurance Analysis Failures	33
Unlicensed Commercial Feed Company	237
Misbranding / Mislabeling	5
Adulterated Product	0
Failure to submit tonnage	1
WARNINGS / NOTICE OF VIOLATIONS ISSUED	246
Quality Assurance Analysis Failures	26
Unlicensed Commercial Feed Company	214
Misbranding / Mislabeling	5
Adulterated Product	0
Failure to submit tonnage	1

Non-Food Quality Enforcement Actions

SEED	Number
TOTAL NUMBER OF CASES OPENED	130
Follow-up third-party complaints	0
Routine Inspections	130
Referrals	0

CEASE & DESIST ORDERS ISSUED	169
Both Germination & Purity Failures	22
Germination Failures	21
Purity Failures	33
Unlicensed Seed Dealer	9
Unlicensed Seed Labeler	26
Noxious Weed Seed	26
Expired Test Date	31
Labeling	1

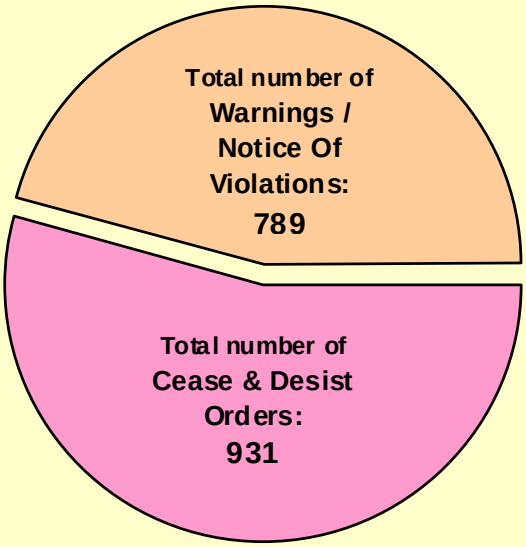
WARNINGS / NOTICE OF VIOLATIONS ISSUED	146
Both Germination & Purity Failures	14
Germination Failures	13
Purity Failures	19
Unlicensed Seed Dealer	17
Unlicensed Seed Labeler	34
Noxious Weed Seed	22
Expired Test Date	26
Labeling	1

PESTICIDE	Number
TOTAL NUMBER OF CASES OPENED	141
Follow-up third-party complaints	4
Routine Inspections	131
Referrals From Other Government Agencies	0
Label Review	0
1080 Pesticide Application Report Reviews	3
EPA Referral	3

CEASE & DESIST ORDERS ISSUED	178
Quality Assurance Analysis Failures	7
State Unregistered Pesticides	156
Federal Unregistered Pesticides	10
Misbranding	5

WARNINGS / NOTICE OF VIOLATIONS ISSUED	138
Quality Assurance Analysis Failures	4
State Unregistered Pesticides	122
Federal Unregistered Pesticides	6
Misbranding	6

Non-Food Quality Enforcement Actions
Fertilizer / Commercial Feed / Seed / Pesticide



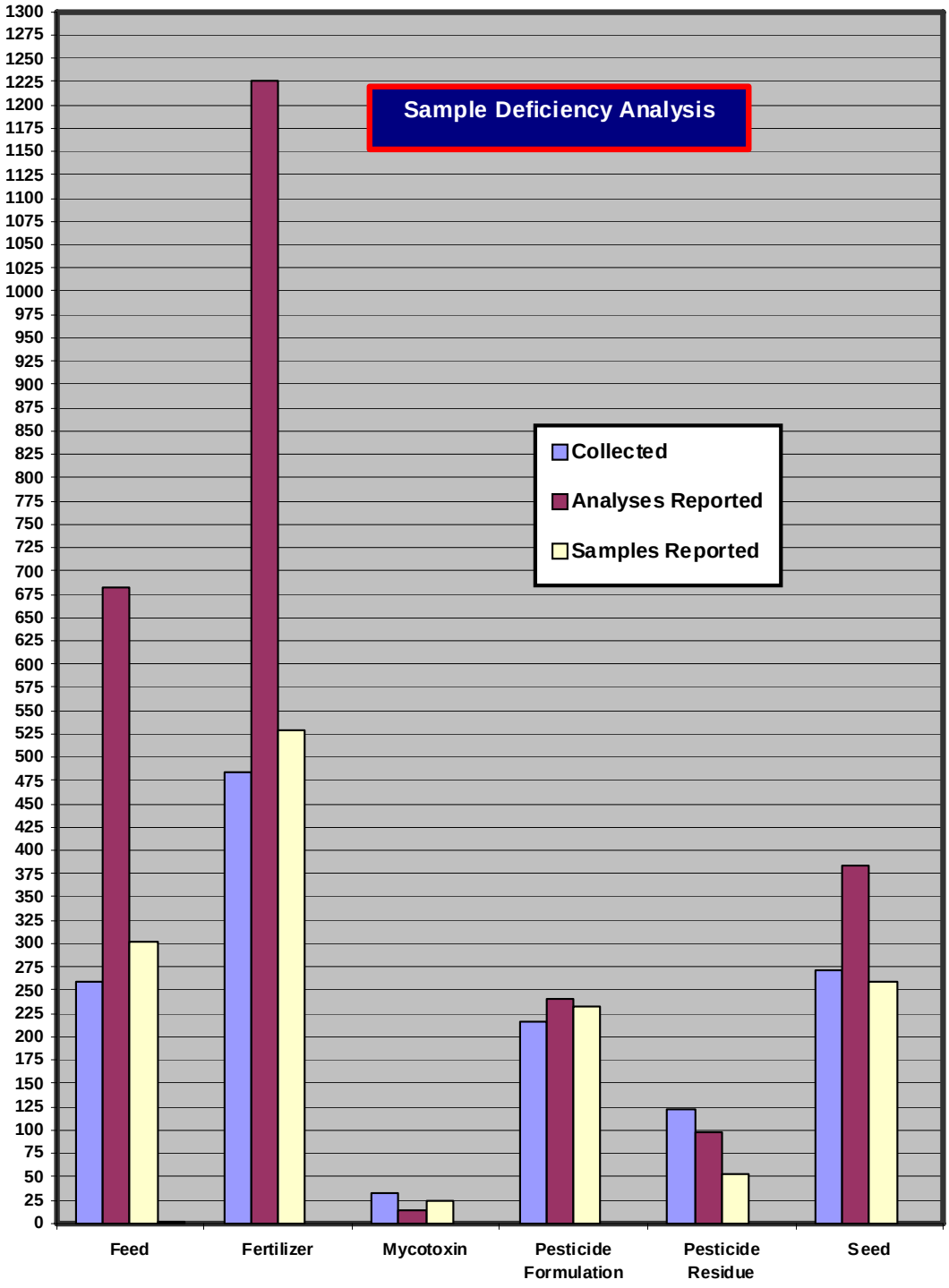
DEFINITIONS

Warning / Notice Of Violation (NOV):

Warns a manufacturer or distributer of violations related to Feed, Fertilizer, Pesticide, and Seed products offered for sale or distribution in Arizona. Multiple warnings may result in products being removed from sale or distribution, as well as injunctions or seizure of violative products.

Cease & Desist Order (C&D):

A C&D is issued when a company fails to come into compliance and requires that the product is removed from sale and distribution in Arizona. C&D Orders remove substandard products from the marketplace for consumer protection.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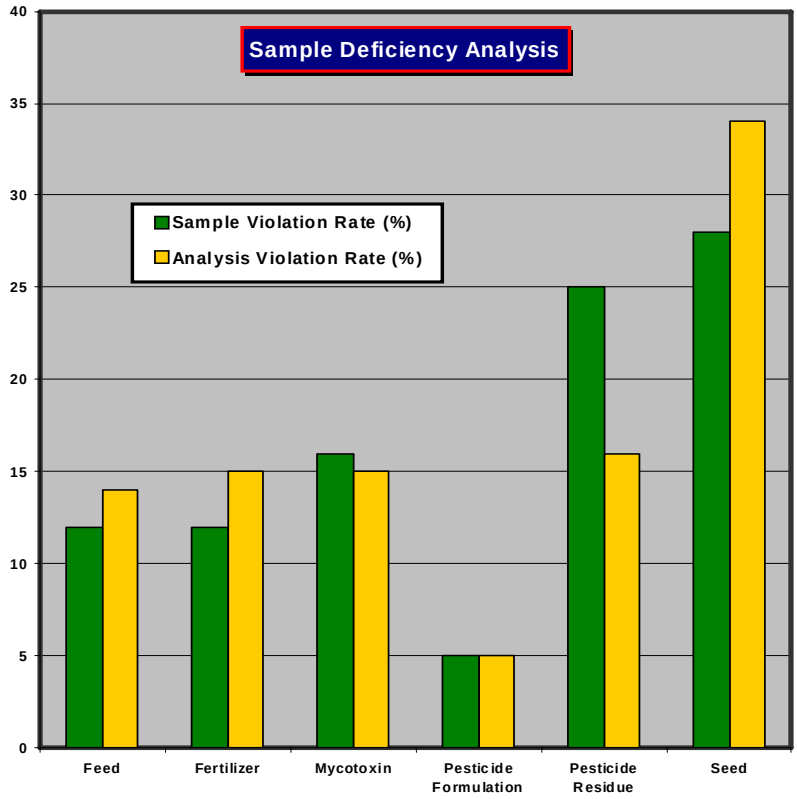
Pesticide Formulation
Pesticide Residue
Seed



Groundwater and Endangered Species Protection

The continued protection of the state's groundwater grows in importance as the EPA asks the states to implement programs to ensure continued water quality. Arizona has one of the toughest groundwater protection laws in the country helping to ease implementation of the program. Monthly meetings are being held with the Arizona Department of Environmental Quality to ensure our programs are coordinated.

We continued analysis of the groundwater from the various wells drilled in Yuma and Maricopa counties. The following active ingredients were detected: atrazine, imazethapyr, imazamox, diuron, imidacloprid, metribuzin, prometon, prometryn, methoxyfenozide, dimethomorph, methoxyfenozide, and tralkoxydim. Dialogue with industry representatives has started so we will be in a proactive position should active ingredients (ai's) be found that are of concern. The meetings are to develop an understanding on what the detections mean, what levels of detection do we need to take further action on and then what the response should be if the detection levels reach the point of concern. Options to deal with these detections range from continued outreach and education to the user community to that of product cancellation. Fortunately the detections have been few and at low levels. Continued monitoring will help us to determine if the ai's found were seasonal detections, one time occurrences or the indication of a trend.

The Federal Endangered Species program was officially implemented by the EPA this year. The department provided outreach to the regulated community on how the program will work, but until such time as the pesticide labels are modified to include the endangered species warning statement, the program has no impact on the grower community.

The program works through a use statement on the label requiring the users to refer to a web site www.epa.gov/esp or call 1-800-447-3813 where they may obtain or review a bulletin for the

county in which the pesticide will be applied. The bulletin will tell if endangered species are present and then any type of required restrictions on the use of the pesticide. It is anticipated that the label statements will begin to show up in a limited manner sometime in 2008.

Office of Special Investigations (OSI)

The Office of Special Investigations (OSI) is primarily responsible for the investigation of criminal activities involving agricultural laws and provides law enforcement support to the other divisions and programs within the department. The office is comprised of individuals specially trained to investigate criminal misconduct regarding native plants theft and destruction, theft and the wanton killing of livestock, cruelty to livestock, food safety, and cultural resource protection.

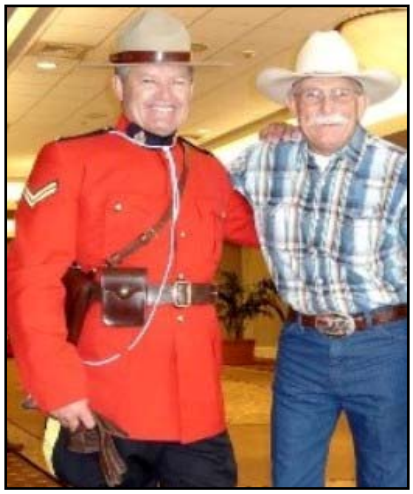
Officer Certification, Training & Meetings

OSI investigators are certified peace officers that are qualified and proficient in their field of expertise. The investigators maintain training standards in firearms and various other proficiency requirements in enforcement disciplines. OSI also has the responsibility for maintaining training records for all departmental peace officers. Arizona Peace Officers Standards and Training audits departmental records to ensure all certified officers complied with state standards of continuing education, training, and firearm proficiency. Compliance results are consistently commendable.

An OSI investigator attended the 20th Annual Conservation Law Enforcement Association Conference held in Prescott, Arizona. This year's conference focused on Practical Kinesic Interview and Interrogation and Winning Extreme Encounters from Street to Court.

All the courses were designed to give each participant the necessary insight into reaching optimal levels of human performance including career responsibilities and policing strategies. Sixteen hours of continuing training credits were received for attending the two-day conference.

Another OSI investigator attended the 61st Annual International Livestock Identification Association Conference, in Fort Worth, Texas, which the Department is a Charter Founder. The conference's focus was on national identification for animals and tracking animal diseases through premises validation and individual testing. The goal of the conference was to promote and develop uniform laws and enforcement procedures relating to livestock identification, inspection, and brand recording.



This year's conference was attended by individuals representing fifteen states and three Canadian provinces. Dr. Dave Morris of U.S.D.A., A.P.H.I.S. gave an update on the National Animal Identification System (NAIS). There is now a three digit number specifically assigned to the USA for all new animal ID tags. The number is 840 which will be on every tag along with the US shield and the statement "do not remove". Canada will have the number 124 on their tags. Currently two states have mandatory premise ID and another will be added in September of this year.

An Administrator with the Grain and Inspection Packers and Stockyards Administration or GIPSA, a division of the USDA,

Illegal destruction of a saguaro

Previous page: *A Royal Canadian Mounted Police Officer posing with an OSI Investigator.*

Vandalism of protected plants

gave an overview of the division's operation. The Division is responsible for determining that whole grains, either imported or exported are what they purport to be.

The Texas State Veterinarian, talked about the state of several infectious and contagious diseases that have or could affect our states. The primary concern is TB which is causing some problems for Texas and especially New Mexico. Currently all fifty states are brucellosis free and all fifty are swine pseudo rabies free in all commercial herds. Currently 47 of 50 are TB free and 49 of 50 are swine brucellosis free.

The investigator also attended the 35th Annual Western State's Livestock Investigators Association (WSLIA) conferences in which he was elected president for 2008. This year's WSLIA event was held in Reno, Nevada. The conference centered on domestic and international terrorism, USDA national ID program, Incident Command training and training sessions on actual court cases.

A senior investigator with Investigation Enforcement Services for the USDA stationed in Utah gave the bulk of the training on awareness of the potential of a FAD outbreak in the USA and what the effect would be.

An OSI investigator is still actively involved in the Arizona Homeland Security Fraudulent Identification Task Force (AFIT). Last year the Governor implemented "Operation Strong Border" to identify, investigate, and prosecute the manufacturers and sellers of all fraudulent identification in the State of Arizona.

Enforcement Activity

During the fiscal year, OSI investigated 32 cases of alleged civil and criminal misconduct involving native plants and livestock. Fifteen cases were filed with county attorney offices and the Attorney General's Office.

Native Plants Investigations

The Arizona Native Plant Law was established to protect wild-growing plants. The law requires a person to have a State permit to take or possess any protected native plant taken from its habitat. Moreover, it is unlawful to destroy or mutilate any protected plant without the consent of the landowner. To regulate the collection of protected native plants, the department enforces the law through investigations, legal action against violators, public awareness through the media, and permit issuance. There were eight cases involving the theft or illegal removal of protected native plant. One civil case is pending review and one case is still under investigation. Four cases were closed by successful adjudication with the issuance of warning citation. One

case was referred to the sheriff's office and one case was reviewed and closed due to insufficient evidence.

During the fiscal year, OSI staff members issued forty-seven interstate shipping certificates on shipments of protected plants.

Saguaro cacti being shipped to a private atrium in New York State

Ocotillos being shipped into Arizona

Livestock Investigations

OSI investigates the killing and theft of livestock and enforces the laws and regulations associated with livestock inspection. Livestock kept on open range must have a registered brand to confirm ownership. In addition, it is unlawful to kill, mistreat, take, or sell livestock of another. It's also illegal to slaughter animals, or sell, or expose for sale the meat without a license.

There were eight cases of theft involving twenty-three cattle and two horses. Two cases have been turned downed for prosecution. One indictment for several counts of theft and one case is currently with the Attorney General's Office for review. The other four are open and ongoing.

There were eight cases of the killing of livestock involving fifteen cattle and one horse. Two cases have been closed for insufficient evidence and the remaining four cases are open and ongoing.

Five cruelty neglect cases were investigated involving eleven horses, nine sheep, and four cattle. Three cases were both civil and criminal. The civil procedures were adjudicated with two favorable and one return to the owners. One criminal procedure has been adjudicated with favorable results for the State. Two are presently in the court system, one awaiting trial and the other awaiting the complaint from the County Attorney's Office. The other two are open and ongoing.

There were eight seizures for questionable ownership involving seven horses and six cattle. All of the cases were adjudicated with favorable results for the State.

There is one fraud case with the Attorney General's Office awaiting a final review and decision.

Food Safety Investigations

OSI investigation responsibilities include assistance in illegal animal slaughtering operation violations for food safety reasons. Federal and state laws require specific sanitary standards to assure that Arizona consumers have a safe supply of wholesome meat and meat products.

While no legal action was taken during the fiscal year, OSI continues to work closely with the Animal Services Division to reduce the threat of illegal meat products entering the market place.

Cultural Resource Investigations

Material evidence of past cultural and natural heritage is found in many areas in Arizona. This includes archaeological, paleontological and historical sites, none of which can be renewed, and when destroyed, are gone forever. The department has the authority to assists in the enforcement of the Antiquities Act to protect and preserve evidence of Arizona's richest legacies.

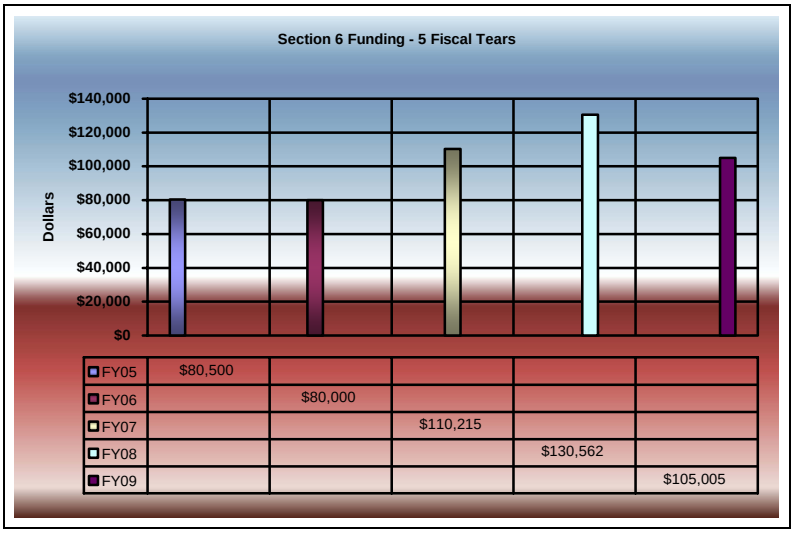
No enforcement action was taken during the fiscal year. However, the OSI staff continues to work closely with other agencies to reduce the threat of losing one of Arizona's richest cultural legacies.

Section Six Grant Program

A Memorandum of Understanding between the department and the University of Arizona was continued to study threatened and endangered plants species under Section 6 of the Endangered Species Act. A Federal grant program totaling $105,005 was proposed to conduct the following studies.

1. Develop a draft recovery plan for the Huachuca water umbel (*Lilaeopsis schafferiana* ssp. *recurva*) $31,097
2. Survey of Acuna cactus (*Echinomastus erectocentrus* var. *acuensis*) $36,699
3. Grand Canyon National Park recovery plan actions (pollination, ecology, and seed bank study) for Sentry Milkvetch (*Astragalus cremnophylax* var. *cremnophylax*) $31,002
4. Population genetics of Welsh's milkweed (*Asclepias welshii: Aprocynaceae*) $6,207

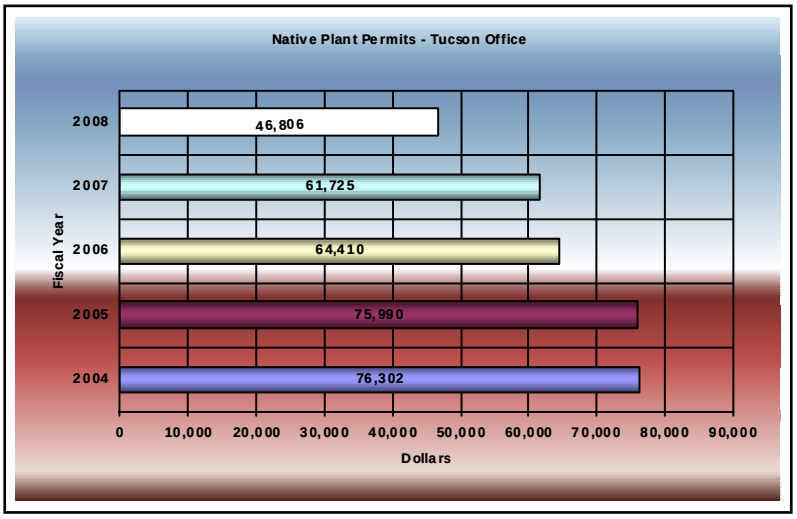
The table below indicates the Section 6 program funding for the last five fiscal years:



This table specifies the amount of funds received for plant studies through the Endangered Species Act grant program for five fiscal years

OSI Administrative Statistics

During the fiscal year OSI had over 2900 public contacts relating to native plant, livestock or some other program related topic. An OSI staff member issues native plant removal permits from the Tucson Office. A clear trend in the revenue from this program is displayed. Following is a summary of this effort in Tucson.



This table specifies the amount of funds received for plant studies through the Endangered Species Act grant program for five fiscal years

Plant Services Division (PSD)

Pest Exclusion and Management

Increased Threat of Pests

Increased execution of various trade agreements has resulted in a higher incidence of trade into and out of the United States and, subsequently, Arizona. Many pests common to foreign countries present a significant threat to Arizona agricultural industry, public well-being and associated quality of life. As more commerce enters Arizona, and significant weather events continue, the risk of introducing plant pests or diseases from other states or foreign countries increases.

An example of serious pest incursions is the detection of the Glassy-Winged sharpshooter in Sierra Vista, Arizona. Glassy-winged sharpshooters vector Pierce's disease of grape, oleander leaf

scorch, alfalfa dwarf and citrus variegated chlorosis as it feeds on plant material, threatening the state's wine grape and citrus industries, and urban landscapes. Governor Napolitano issued an emergency declaration near the end of FY 2006 releasing an initial $200,000 to combat this pest in Sierra Vista and establish a statewide detection program. In FY 2007, the detection of 271 adult glassy-winged sharpshooters in traps resulted in the treatment of 16 commercial and 697 residential properties in Sierra Vista. In FY 2008, the Department's objectives included completion of the eradication of this pest, hopefully by late in the calendar year.

Dangers

Introduction of non-native plant pests can have devastating effects on the yield of agricultural and horticultural commodities, and can increase industry production costs through pesticide applications for eradication or control of destructive pests. Plant pests reduce the quality of products and threaten the demand for Arizona products.

Metropolitan Phoenix is among the nation's ten largest cities and growing. This unprecedented growth has fueled significant increases in the importation and distribution of plants, many of which originate in parts of the country already infested with devastating and costly exotic pests such as the Asian citrus psyllid that vectors citrus greening, a serious threat to residential and commercial citrus trees.

Pest Exclusion Safety Nets

The Pest Exclusion and Management Program has moved to incorporate new technologies, advanced inspector training and updated quarantine requirements. Intensive pest-trapping methods are used to meet the challenges of rapid urban development, increased trade and expanded export opportunities for Arizona's agricultural industry.

Free-From Status

Arizona continues to enjoy freedom from numerous exotic pests that have cost infested states millions of dollars in attempted control or eradication. Through the deployment of several safety nets intended to minimize the threat of exotic species establishment, the Arizona Department of Agriculture protects the quality of Arizona life. Components of these safety nets include Arizona's ports-of-entry, interior inspection operations**,** and comprehensive quarantine and survey and detection programs against the following:

Arizona's Most Unwanted Pests

- **Citrus Greening** — poses a serious threat to Arizona's citrus trees. Citrus greening is vectored by the Asian citrus psyllid. Trees infected with citrus greening, also known as Huanglongbing disease of citrus, may produce misshapen, unmarketable, bitter fruit. Other than tree removal, there is no known cure for the disease. In areas of world affected by citrus greening the average productive lifespan of citrus trees has dropped from 50 or more years to 15 or less. Trees in orchards usually die 3-5 years after becoming infected and require removal and replanting. An infected tree produces fruit that is unsuitable for sale as fresh fruit or for juice.

USDA regulates Florida and portions of Louisiana for citrus greening; for Asian citrus psyllid, Florida, Hawaii, Guam, Puerto Rico, and portions of Louisiana and Texas.

Asian citrus psyllid adult

- Light-Brown Apple Moth (LBAM) – was discovered in Alameda County, California in March, 2007. Since then, California reports LBAM detections in an additional 10 counties. This is a serious pest because the larvae feed on a wide range of crops and ornamental plants and trees important to Arizona. In January 2008, Acting Agriculture Secretary Chuck Conner announced the availability of $74.5 million in emergency funding to continue efforts in California to stop the spread of LBAM. Federal Domestic Quarantine Order DA-2008-17 regulates the interstate movement of LBAM host to prevent the spreading the infestations to other states.

Light-Brown Apple Moth larva feeding on the surface of an apple - photo courtesy of USDA

Feeding damage on pear leaf caused by Light-Brown Apple Moth larvae - photo courtesy of USDA

- **Pecan Weevil** – attacks the pecan nut, causing serious crop loss. The larvae (grubs) develop inside nuts and destroy the entire kernel by their feeding process. The nearest infestation of pecan weevil is in New Mexico. Arizona Administrative Code R3-4-231 restricts the entry of pecans, other nuts, and firewood to prevent movement of pecan weevil into the state.

White larvae (grubs) destroying the inside of a pecan

Mature weevil larva exiting a nut

- **Red Palm Mite –** The red palm mite appeared in Puerto Rico in 2006 and in Palm Beach County, Florida in December 2007. This is a pest of several important palm species including areca, date, and queen palms. It causes serious leaf damage, ruining the ornamental value of the plants. Wind currents and the movement of infested nursery stock easily distribute this mite in addition to handicrafts (hats, bowls, etc.) fashioned from infested coconut leaves that are sold to tourists on many Caribbean islands.

Red palm mite infestation on *Musa* sp., Trinidad – photo courtesy of FDACS

On palms, yellowing of leaf tissue is visible plant damage that can be caused by feeding of the mite. Photo by Joel Floyd, USDA

- **Citrus Canker**—results in rapid death of citrus trees. This disease threatens commercial and residential citrus production in Arizona. USDA regulates the interstate movement of citrus nursery stock and citrus fruit from Florida to prevent further spread of the disease in Arizona and other citrus-producing states.

- **Cactus Moth**—The Cactus Moth is a significant threat to prickly pear cactus in Arizona. This insect can attack all species of prickly pear cacti (*Opuntia spp.*) in North America and can completely destroy a cactus plant. Larvae burrow into the pad to feed, and then move to other pads before pupation. These photos are examples of the damage caused by this serious pest.

- **Japanese beetle** — defoliates ornamental plants and destroys turf roots resulting in decline or death; threatens the quality of golf courses, parks, and lawns, and export potential of Arizona's green industry. Three of Arizona's neighboring states (Colorado, Utah, and New Mexico) are battling infestations of Japanese beetle. The US Domestic Japanese Beetle Harmonization Plan aids in preventing the interstate spread of this pest on nursery stock. Federal rule regulates the movement of aircraft departing from infested areas.

Adults feeding on a grapevine leaf - USDA

Japanese beetle grubs destroyed t his turf by feeding on underground roots – USDA

- **Gypsy Moth** — larvae damage trees by eating the foliage, which weakens and eventually kills them, affecting the aesthetic value of forested areas.

The gypsy moth larva

Gypsy moth larvae have eaten most of the foliage from this tree.

- **Fruit Flies** (Mediterranean, Mexican, Oriental, and Caribbean) — devastating pests of citrus and other types of fruit that impact quality and yield. Presence in Arizona would limit export potential of citrus commodities. USDA restricts the movement of host material from areas under quarantine to prevent the spread of infestations. Photos show fruit fly larvae in damaged fruit.



- **Red Imported Fire Ant**—an aggressive competitor with native ant species, its aggressive behavior, and its ability to both sting and bite threatens public well being, quality of life, and agricultural production, especially livestock. Presence in Arizona would limit the export potential of the state's green industry. In appearance, the native Southern Fire Ant closely resembles the Red Imported Fire Ant. Federal rule restricts movement of regulated commodities from infested areas.

Field Operations: Ports-of-Entry

The ports, Arizona's first line of defense against the importation of exotic pests, are operated on curtailed schedules as staffing allows. In FY 2008, funding was received to reopen the Ehrenberg port of entry on a limited basis. The Duncan port of entry operates 8/5 with funding from the California Department of Food and Agriculture. All ports are staff to inspect commercial vehicles hauling commodities that may harbor serious plant pests and diseases or that may originate from infested areas.

Commercial Inspections

In FY 2008, of the total trucks inspected, 3,003 were rejected because of pest interceptions or noncompliance with quarantine rules and regulations. Interceptions of pests totaled 2,713; a reduction of 70% over FY 2007.

California-Arizona Partnership

Recognizing the pest exclusion effectiveness of Arizona's ports system, the California Department of Food and Agriculture (CDFA) entered into a renewable agreement in FY 2000 with the department to inspect commercial trucks entering Arizona and destined for California. The inspections are conducted at Arizona's eastern ports and are to detect the presence of RIFA and other pests. The $350,000 annually from CDFA and in-kind contributions from department funds allows for staffing of the Duncan port and augments staffing at the San Simon and Sanders

ports. Initial continuation of this State-to-State agreement in FY 2008 solidified efforts to establish a regional approach to pest exclusion. The agreement will not be renewed in FY 2009 due to the department's inability to fully operate the eastern ports of entry 24/7 even with the California support.

Interior Inspections

Inspection staff assigned to four operational locations (Phoenix, Tucson, Yuma, San Simon and Ehrenberg) function as the second safety net against pests. Interior inspectors carry out a variety of duties including issuance of certificates, field inspections for quarantine clearance and export certification in seed and produce distribution centers, to serve the agricultural industry and contribute to the prevention of pest establishment within the state.

An Overview

In FY 2007, inspection staff intercepted 16,119, a decrease of 27% over FY 2007, within the state's interior through various inspections; 2,848 federal phytosanitary certificates were issued for the export of vegetable, agricultural, and ornamental seed, produce, nursery stock, wood products, and various other agricultural commodities. Pre-clearance of plants for pests, most notably citrus stock, before distribution within the State is a major inspection task.

Survey and Detection

The early detection of potential pests and delimiting surveys of pest infestations through trapping and surveillance programs for a wide range of pests is the final safety net in the department's pest exclusion effort. Statewide, an average of 6,085 traps were placed, serviced and monitored throughout FY 2008 for 22 targeted pest species.

Aggressive Detection

Foreign nations require scientific data to ensure that pests that inhabit Arizona will not harm their crops. Because the department maintains an aggressive detection program to help protect that federal free-from pest distinction, Arizona's agricultural producers can ship almost anywhere in the world and their products are welcomed in many foreign markets. This kind of market access is unique and is the result of the Arizona Department of Agriculture's commitment to protect Arizona industries.

Fruit Fly

In particular, many foreign nations are concerned about the fruit fly complex. Fruit flies, much like a wormy apple, cause citrus fruit to be cosmetically unacceptable to consumers and increase spoilage in commercial storage.

The department's fruit fly detection program, supported in part through a United States Department of Agriculture, Animal and Plant Health Inspection Service (APHIS) grant, involves monitoring our nearly 3,075 traps placed statewide and currently meets or exceeds the National Exotic Fruit Fly Trapping protocol. To date, the department's efforts have achieved the result that no fruit flies of concern have been detected in the state.

Each year the Survey & Detection program leaders evaluate the fruit fly detection endeavors, with an eye for efficiency, utilizing the most current accepted techniques in the industry. In FY 2008, ADA inspectors continued to use all internationally accepted lures and trapping arrays and techniques for a highly efficient detection strategy for all exotic fruit fly species of concern. Add to this an ongoing training process for fruit fly trapping personnel and a focused quality control system, and the result is that Arizona citrus, both commercial and residential, is assured of appropriate protection from a debilitating infestation from these destructive pests.

Nut Pest Monitoring

The nut industry, including pecans, pistachios, and walnuts, is a fast growing agricultural industry within Arizona. Arizona production accounted for $24.5 million in pecan exports in FY2006 alone. Production acreage continues to grow annually, with approximately 3000 acres of new production in Southeastern Arizona in the previous year. Several devastating pests exist within the nut producing states surrounding Arizona, but Arizona still enjoys a pest free status with regard to them. The department has developed and implemented a detection strategy to monitor for the introduction of several of these pests, including the Hickory Shuckworm, the Pecan Nut Casebearer, the Pecan Weevil and the Walnut Husk Fly. Inspectors place traps in both commercial and residential pecan environments in order to monitor for an introduction of these devastating pests. In addition, Arizona pecan cleaning facilities are inspected during the cleaning season each year to ensure Arizona pecans are pest free and therefore able to enter the export market unhindered.

Hand in hand with producers and industry representatives, the department is leading this proactive endeavor to keep Arizona-produced nuts free from pests of export significance, making Arizona-produced nuts a commodity that is desired by many in this important export market.

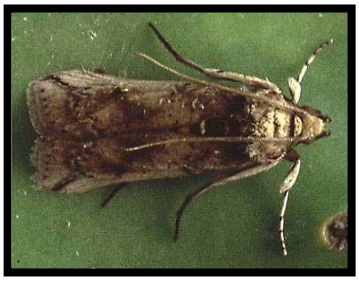
Gypsy Moth

Gypsy Moth, a devastating forest pest well established in the northeastern United States, is a pest that is threatening Arizona's forests. Leaf destruction caused by the feeding caterpillars weakens trees and can lead to tree death. Once again, due to department commitment, no reproducing gypsy moth population has been detected in Arizona. Occasionally a “hitchhiking” male moth has been detected in traps placed at RV parks. Efforts to prohibit gypsy moth movement here are underway. The department maintains an active gypsy moth trapping program including placement and servicing of traps on state and private forestlands. High-risk locations, such as RV parks, are routinely trapped.

Citrus Commodity Survey

Citrus, both its commercial production and popularity as a residential landscape choice, has historically been a key component in Arizona's diverse landscape. Its survival, however, is continuously threatened by a wide range of harmful pests, many already found in the citrus producing states adjacent to Arizona. In order to help protect Arizona citrus, the Arizona Department of Agriculture Plant Services Division conducts an annual commodity based survey. The department has trained specialized surveyors who utilize a variety of detection techniques, which include conducting visual inspections of the groves, collecting soil samples, as well as deploying and monitoring insect traps. With the diligence of these specialized teams, along with the cooperation of the industry, we can protect Arizona's citrus from these potential threats.

Cactus Moth



This extremely invasive prickly pear cactus pest is threatening native landscapes and agricultural industries throughout the southern United Sates and Mexico. The Arizona Department of Agriculture is on the cutting edge in the detection of this pest.

Detection traps are strategically placed in key potential introduction sites in order to monitor for its arrival and allow for a rapid response by regulatory and industry representatives. In conjunction with federal support, the department is committed to protecting our native plant material and key agricultural industries threatened by the Cactus Moth.

Commitment to Service

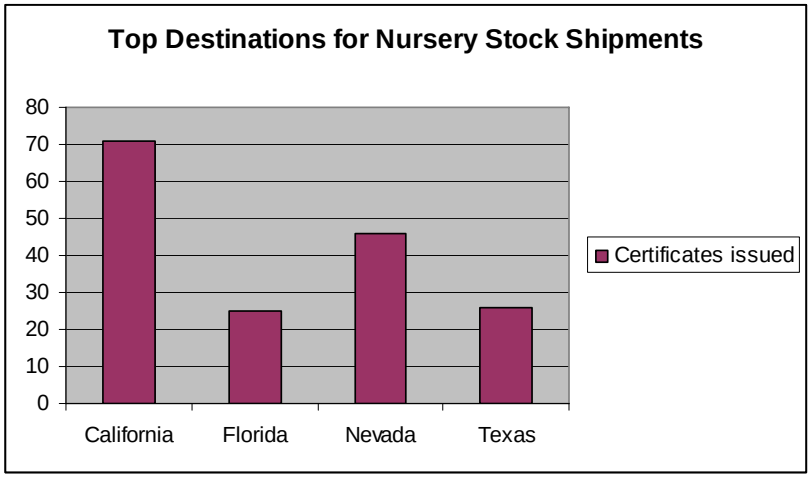
Arizona Department of Agriculture continues its efforts to improve timeliness and quality of customer service delivery and even though faced with the continued impact of budget reductions, reduced inspection staff as well as numerous other pest challenges, the Pest Exclusion and Management Program demonstrated its commitment to service by the following:

Export Certification

The division administers certification programs to facilitate interstate and international movement to agricultural commodities.

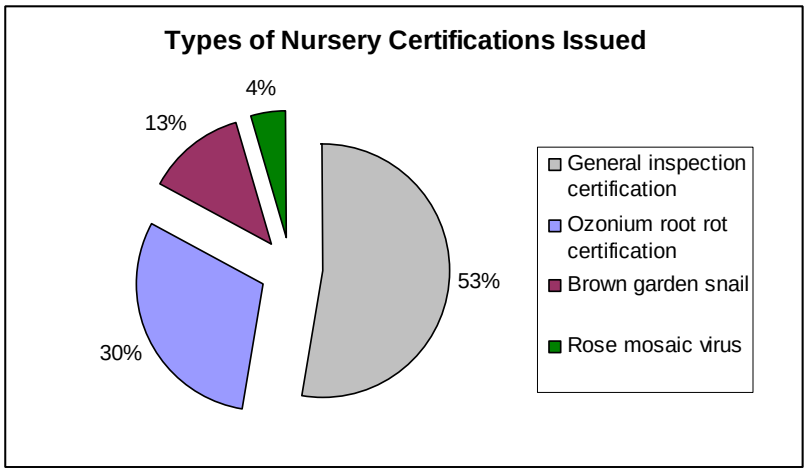
- **Domestic shipments of nursery stock**

In FY 2007, inspectors issued 1646 single shipment certificates for shipments of agricultural commodities to other states. Nursery stock accounted for 169 certificates.



- **Voluntary nursery inspection certification program**

The Division processed 300 applications from Arizona nurseries requesting certification to comply with the entry requirements of other states, and issued 231 individual certificates following inspection of the applicants' properties.



World Market Access

Successful verification of the integrity of our pest exclusion efforts and free-from status for quarantine pests of concern to our trading partners ensures greater opportunities for Arizona's agricultural industry, most notably expanded international market access.

Federal Phytosanitary Certification

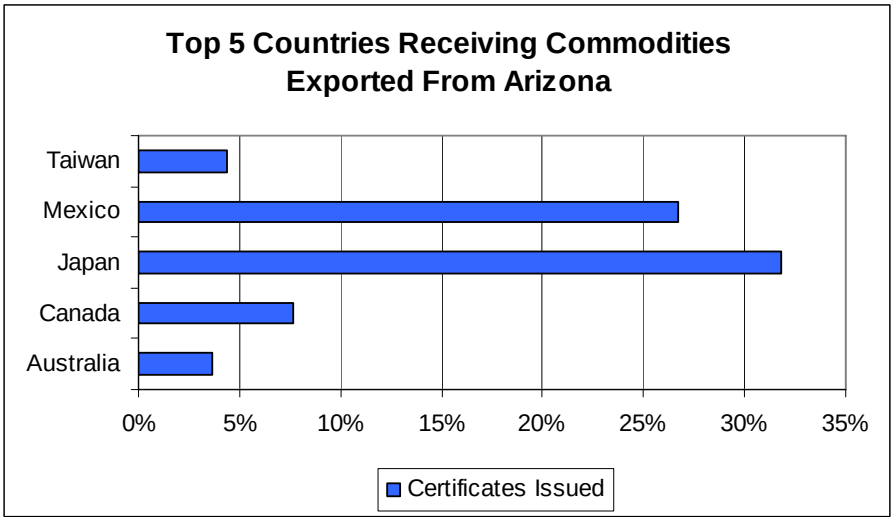
- The department received 799 applications for phytosanitary field inspection of seed crops for international export. 44,523 acres were inspected and found free of pests and diseases.

Seed Crops Inspected

Cotton.....42%
Vegetable.....33%
Melon.....21%
Grain.....2%

Federal Export Certification of Agricultural Commoddities

- The division issued 2,853 federal export certifications to accommodate shipment to foreign markets.



Export Enhancement

Arizona's economy benefits greatly from the department's strict maintenance of its aggressive pest exclusion program. In previous years, government quarantine officials from the People's Republic of China, Chile, Argentina, Israel and Mexico reviewed the department's pest exclusion efforts to the end that more and more foreign nations have opened their market, thus allowing Arizona producer's greater financial growth options.

Noxious Weeds

"Weed" is a term used to designate a pest plant. Certain imported or introduced (non-native) invasive weeds are extremely destructive and labeled as noxious for regulatory purposes.

Some of Arizona's Weeds of Major Concern

Giant salvinia
Russian knapweed
Leafy spurge
Camelthorn
Dalmatian toadflax
Onionweed
Buffelgrass
Yellow starthistle
Sweet resinbush
Diffuse knapweed
Hydrilla
Floating water hyacinth

Cooperative Effort

The department maintains a Noxious Weed Program that coordinates a number of state, federal and university weed exclusion plans and control efforts dedicated to preventing environmental disasters caused by invasive plants. Arizona's noxious weed administrative rules divide the Noxious Weed List into three groups.

1. Regulated noxious weeds found within the state may be quarantined to prevent further spread. If the regulated noxious weed in not quarantined, the department shall provide the grower with technical information on effective weed control activates through integrated pest management.

2. Restricted noxious weeds found within the state shall be quarantined to prevent further infestation or contamination. Commodities or land may be quarantined until eradication is complete.

3. Prohibited noxious weeds are prohibited from introduction into Arizona.

At the beginning of FY 2008, 13 Weed Management Areas (WMA's) were actively pursuing control or eradication goals, mapping local weed distributions and conducting public information programs in Arizona.

Tonto WMA leader, Bonnie Jo Klein, using outreach tools to educate school aged students on the impacts and problems with noxious weeds that affect their area.

Noxious Weeds for Sale

As each spring flower season approaches, weed dispersal can happen from businesses such as grocery, drug, pet, hardware stores and nurseries. Most gardeners do not think of nurseries or gardening shops as sources of pest plants. Arizona Department of Agriculture inspectors find prohibited weeds in retail seed displays and in display ponds each year. Often, non-native species have no natural enemies in new environments and, if exotic species are aggressive, they may become weedy invaders in their new habitats.

Morning glory vine (left) and Floating water hyacinth are examples of noxious weeds found for sale in Arizona.

The Arizona Invasive Species Advisory Council (AISAC)

In June 2007, the Arizona Invasive Species Advisory Council was reconvened by Governor's Executive Order 2007-07 and directed the AISAC to develop an invasive species management plan by June 30, 2008. The Arizona Department of Agriculture took a leadership role as co-chair to the AISAC with its partner agency, the Arizona Game and Fish Department, and played a key role in the development of a statewide invasive species management plan. This plan was developed in coordination with many other agencies and organizations with a goal to make recommendations to the Governor on addressing invasive species education, prevention, detection, control, and restoration needs in Arizona. In this plan fifty-three recommendations were developed under five strategic concepts: Leadership and Coordination, Research and Information Management, Anticipation and Outreach, Control and Management, and Funding. In developing the plan, specific themes appeared consistently across the strategic concepts and, as such, need to be emphasized. These repeating themes include needs to:

- Cooperate, coordinate, and increase the effectiveness of communication among agencies and stakeholders to implement comprehensive invasive species management;

- Implement the Memorandum Of Understanding (MOU) and recruit additional stakeholders to ensure cooperation and collaboration;

- Create the Center for Invasive Species as a web-based network that would be the gateway for information collection, sharing, and distribution to aid the public, agencies and organizations in Arizona in addressing invasive species management needs;

- Seek to establish a rapid response fund and develop a strategy to assess the economic feasibility of creating a sustainable emergency response resource to address the long term issues associated with response to critical invasive species detections;

- Emphasize education and outreach as integral components to effectively accomplish goals identified in each strategic concept;

- Facilitate amending applicable state grant programs so that eligibility criteria would include addressing invasive species issues. Publicize grant opportunities that can potentially fund or enhance efforts for the strategic concepts;

- Pursue, cultivate, and secure creative funding solutions from public and private sources. Raise the awareness of state, federal, and community decision makers for sustained commitment to manage invasive species threats, complementary to and not in lieu of other priority initiatives and program needs.

With the approval of the plan on August 4, 2008 the AISAC will now be in the process of implementing the Arizona Invasive Species Management Plan to address invasive species needs in Arizona.