

# 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 FY2006-2007



# Arizona Department of Agriculture

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September 14, 2007

The Honorable Janet Napolitano  
Governor, State of Arizona  
1700 W. Washington St.  
Phoenix, AZ 85007

Governor Janet Napolitano,

I am pleased to submit to you the Arizona Department of Agriculture's Annual Report for fiscal year 2006-2007. 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 that our staff has been diligent in awarding grant funds, administering advisory committees, training and protecting agricultural workers, and working to protect one of the safest and most affordable food supplies in the world.

In a time that some Arizonan's are concerned about the safety and quality of imported foods, 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.

These efforts have been enhanced by your support and the Arizona State Legislature's decision to invest in improving our ability to secure the ports of entry and to conduct quality and safety testing at the State Agriculture Laboratory. 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,

A handwritten signature in cursive script that reads "Donald Butler".

Donald Butler  
Director  
Arizona Department of Agriculture

# Animal Services Division (ASD)

## Food Safety, Quality Assurance

The following Food Safety, Quality Assurance (FSQA) programs were 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.

### **Cooperative industry samplers**

Periodic checks are made on both milk tankers and milk haulers who are licensed by ADA after passing a test on milk handling and sampling. ADA licensed haulers pull samples of all milk they transport for potential random sampling at destination by dairy inspectors. Samples selected for microbial or other 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 transfer milk. Pasteurizers and holding tubes are also checked for proper pasteurization temperatures and times, as well as checking for public health controls which automatically 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?**

Most 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. 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 potential risks of consuming it.

Another process sometimes confused with pasteurization is homogenizing 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, which is blended with powdered charcoal to denature the milk and turn it gray in order to deter consumption by humans.

## **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 ADA 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 ADA 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. Four state employees are stationed at two 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.





**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 the United States Department of Agriculture 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.

ADA 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. Inspector ensures 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. ADA'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 which 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 some 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.**

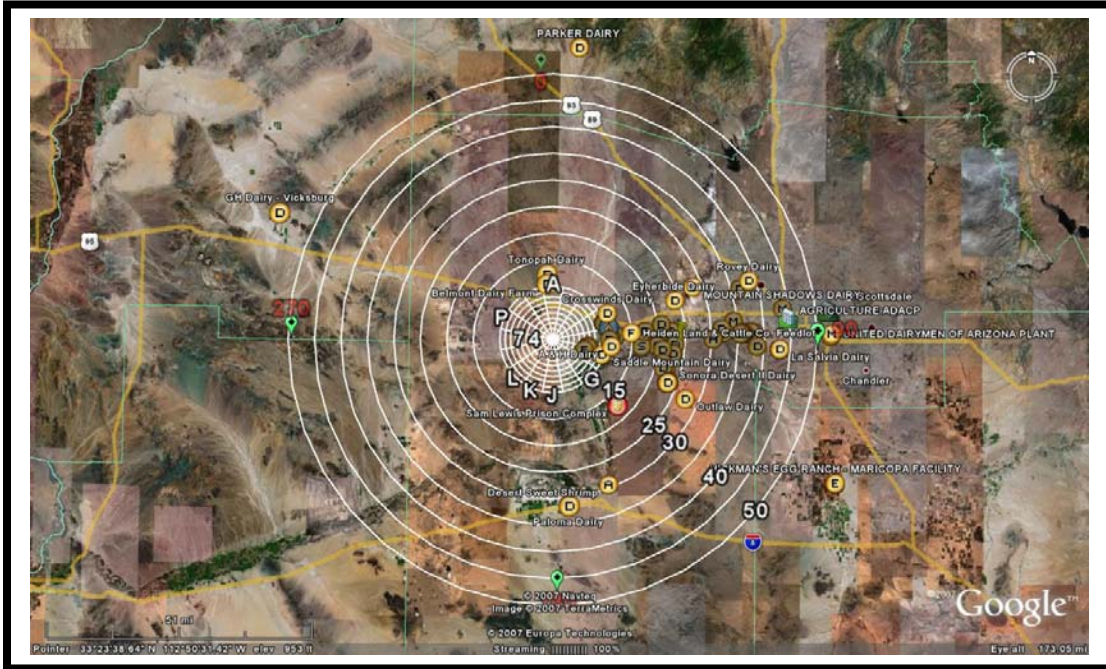
## **Palo Verde Nuclear Generating Station – Fixed Nuclear Facility – Emergency Response**

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, ADA 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.

For the 2007 exercise, federal evaluators characterized ADA's participation and effort as "*overall excellent*" with certain areas requiring corrective action. The FSQA programs are integral to departmental participation in such drills, 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, other state and federal agencies, FSOA 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 as soon as possible. Field inspectors or sanitarians are dispatched to check on the product purchased if the situation requires. If the concern is quality or weight related, the inspector generally can resolve it promptly, following up on the issue at wholesale outlets. Any concerns relating to human illness are promptly addressed, often in cooperation with other agencies. Such concerns are a top priority of these consumer protection 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.

ADA's Office of the State Veterinarian (OSV) oversees the AHWP responsible for safeguarding our livestock, poultry and commercial fish resources from devastating diseases, and 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.

ADA'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              | 10,715  |
| Bovine Brucellosis – Blood Samples Collected at Slaughter | 153,637 |
| Swine Brucellosis – Blood Tests                           | 774     |
| Bovine Tuberculosis – Tuberculin Skin Tests               | 84,536  |
| Equine Infectious Anemia – Blood Tests                    | 14,840  |
| Official Calfhood Brucellosis Vaccinations                | 66,135  |

## 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 is being planned 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 ADA 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, ADA 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 ADA staff veterinarians during the past year include:

|                          |    |
|--------------------------|----|
| Cattle                   | 1  |
| Equine                   | 16 |
| Sheep                    | 1  |
| Total investigations     | 18 |
| Total positive diagnoses | 1  |

All FAD investigations were conducted within 24 hours of notification and, with the exception of one case, were negative for FAD. This demonstrates ADA'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. ADA 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 ADA 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 ADA'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 ADA. 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.

ADA 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 now 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.

ADA 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*

| <b>CLASS OF LIVESTOCK</b> | <b>NUMBER OF IN SHIPMENTS</b> | <b>TOTAL ANIMALS</b> |
|---------------------------|-------------------------------|----------------------|
| Dairy Cattle Replacements | 612                           | 42,466               |
| Beef Cattle               | 3,106                         | 395,328              |
| Swine                     | 391                           | 34,677               |
| Sheep and Goat            | 396                           | 47,207               |
| Horses                    | 7,997                         | 15,588               |
| Fish and Shrimp           | 138                           | unavailable          |

## *Field Investigations and Inspections Summary*

| <b>Category Name</b>                | <b>Total number</b> |
|-------------------------------------|---------------------|
| Health and Movement Inspections     | 4,083               |
| Butcher Inspections                 | 1,374               |
| Animal Care Investigations          | 1,837               |
| Animals-at-Large Investigations     | 1,774               |
| Self-inspection certificates issued | 25,990              |
| Theft Investigations                | 48                  |

## *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 ADA 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 95 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 85% of the states total produce production, based on carton count for fiscal year 2007 are as follows:

|                 |            |             |           |
|-----------------|------------|-------------|-----------|
| Iceberg lettuce | 22,374,986 | Broccoli    | 5,646,401 |
| Cantaloupe      | 14,556,986 | Watermelon  | 5,553,936 |
| Romaine lettuce | 11,360,922 | Spring Mix  | 4,202,866 |
| Tomatoes        | 5,918,571  | Honeydew    | 3,653,609 |
| Leaf lettuce    | 5,660,229  | Cauliflower | 2,843,338 |

As detailed below, the Citrus, Fruit and Vegetable Standardization Program and the Federal / State Inspection Program conducted 60,000 inspections last year. In addition, the Citrus, Fruit and Vegetable Standardization Program issued 466 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 and 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 and 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 and 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 and 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 and 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 and 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 14.5 million packages of tomatoes and 16.5 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 and 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.

### *Department Pride in the Statewide Gleaning Project*

Governor Janet Napolitano has issued an Executive Order 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 and 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 20 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. ACT 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 ACT to provide a formal means by which the regulated agricultural community may request compliance assistance without regulatory intervention. ACT 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

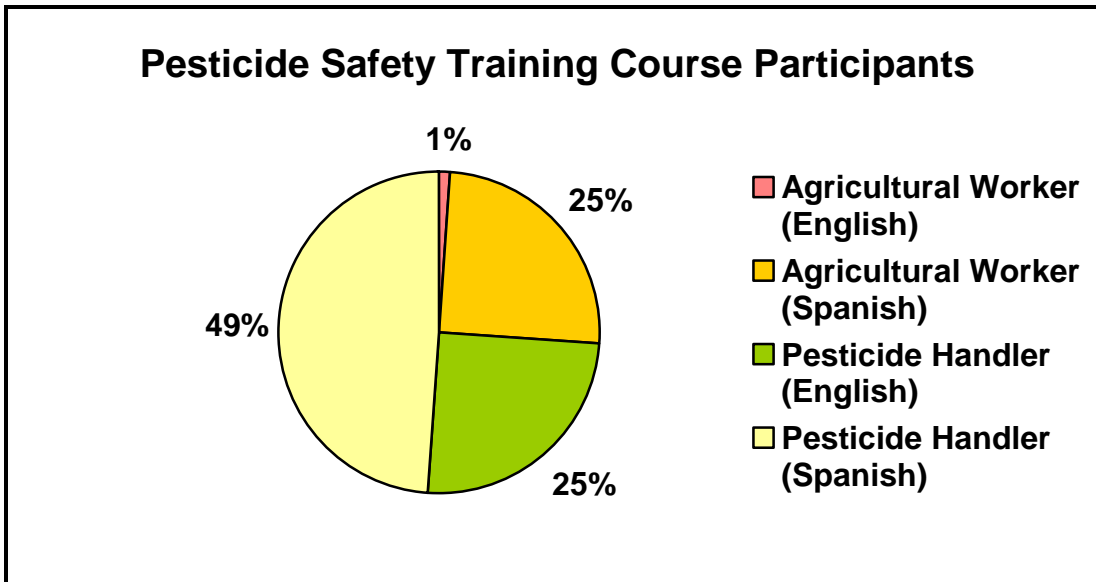


The Environmental Protection Agency's (EPA) Worker Protection Standard (WPS) is designed to reduce the risk of pesticide exposure to pesticide handlers, agricultural workers, and the environment. The WPS includes requirements for pesticide safety training, notification of pesticide applications, use of personal protective equipment, restricted entry intervals following pesticide application, decontamination supplies, and emergency medical assistance. Staff of the 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 compliance on-site visits to assist farm and nursery owners in complying with pesticide regulations.

Keeping growers informed about changes to the federal and state pesticide laws that could impact their operations is also an integral function of the ACT program. In fiscal year 2007, staff was informed of several Environmental Protection Agency proposed changes to the Federal Worker Protection Standard, such as the introduction of "competency gauges" for pesticide safety educators and pesticide handlers, minimum age restrictions for pesticide applicators and periodic blood work for people who work with certain types of insecticides known to cause long term nervous system disorders. ACT staff provided this information to growers and licensed pesticide applicators who attended various Farm Bureau meetings and continuing education courses sponsored by ADA and ACT.

### *Pesticide Safety Training*

During fiscal year 2007, ACT provided pesticide safety training to 813 pesticide handlers and agricultural workers; a 31% increase in the number of people who received training during the previous fiscal year. As noted in the following chart, 74% of the people who received training were pesticide handlers who work directly with pesticides or pesticide residues. Of the pesticide handlers, 204 attended a two-hour pesticide safety course in English and 404 attended the same course in Spanish. The remaining 26% 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. Eleven of the 205 agricultural workers who attended this training received the information in English and 194 in Spanish.



### *Joint Pesticide Safety Train-the-Trainer Workshops*

The ADA's ACT Program and Environmental Services Division partnered with staff from the Environmental Protection Agency's Region IX, the California Department of Pesticide Regulation, and pesticide inspectors from The Fort Yuma Quechan Indian Tribe, and The Colorado River Indian Tribes to present four "Joint Arizona, California, and Tribal Pesticide Safety Train-the-Trainer Workshops." These two-day workshops were presented in English and Spanish, and were held in Salinas, California and Yuma, Arizona.

Approximately 120 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 in California and Arizona through the fiscal year 2007 workshop series.

Workshop sessions were designed to increase knowledge on human and environmental health issues when working with pesticides and steps to reduce exposure to chemicals. Important safety and health information such as pesticide label comprehension, personal protective equipment, environmental protection, and pesticide emergency response were included.



Participants also received an overview of the Worker Protection Standard and learned about pesticide laws and regulations that are unique to Arizona, California, and local tribal communities.

Due to the success of the Joint Train-the-Trainer Workshops, the team will soon expand upon the current program to serve the informational and resource needs of pesticide safety trainers in the Arizona, California and Mexico border regions through a grant ACT received from the Border Environment Cooperation Commission and EPA Region IX. They will

collaborate with trainers from Mexico's National Train-the-Trainer Program and will offer six additional workshops (two in English and four in Spanish) from 2007-2009.



Ultimately, the new workshops will benefit pesticide safety educators who work in the border regions of California/Baja and Arizona/Sonora, Mexico, and those who travel with their companies and are responsible for training agricultural employees in multiple jurisdictions. Funding for the workshop series has been provided by the United States Environmental Protection Agency, through their 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 2007, after receiving several requests for pesticide safety information in DVD format, ACT staff sought and received permission from the University of California, Davis to copy their popular pesticide safety video, *Protecting Yourself from Pesticide Hazards in the Workplace*. The video, which was produced in English and Spanish, contains six dramatizations of pesticide-related situations that agricultural field workers might encounter at work or home. The video covers all of the points that must be addressed when conducting Worker Protection Standard training for fieldworkers and was designed to increase comprehension of workplace hazards and ways to avoid pesticide exposure. ACT staff copied the master video onto 1,000 DVDs and has since provided this valuable resource to over 250 pesticide safety trainers.

## Air Quality Compliance Assistance

### *Regulated Agricultural Best Management Practices*

The Regulated Agricultural Best Management Practices (RABMP) program has completed its fourth 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.

Outreach and education is provided to Arizona's agricultural community about air



*Tree, shrub, or windbreak planting means providing a woody vegetative barrier to the wind, and is an agricultural BMP for non-cropland, and cropland areas. Barriers placed perpendicular to the wind direction can reduce wind speeds by changing the pattern of airflow over the land surface, which helps reduce wind erosion and PM10*

quality in an effort to reduce regional dust pollution through:

- On-site visits to farms and nurseries for the selection and voluntary implementation of BMPs. The process of assessing agricultural practices and the impacts of implementing agricultural BMPs during farming operations is focused on the reduction of emissions from tillage and harvest, and on non-cropland and cropland areas that are agricultural emission source 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 that explains in Spanish and English, 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 best management practice options, a "What's New" column highlighting current events and contact information to obtain agricultural air quality information or to schedule an on-site visit. Over 1,500 newsletters are distributed annually.
- The Governor's Agricultural Best Management Practices Committee which has begun updating the current agricultural BMPs for Arizona's regulated PM10 areas. Producers are encouraged to adopt two BMPs for each agricultural emission source category: tillage and harvest, non-cropland and cropland areas. Five additional BMP measures have been added that producers can choose from: integrated pest management, precision farming, green chop, transgenic crops, and the cessation of night tilling from 2:00 a.m. to 8:00 a.m. during stagnant air conditions on high pollution advisory days.

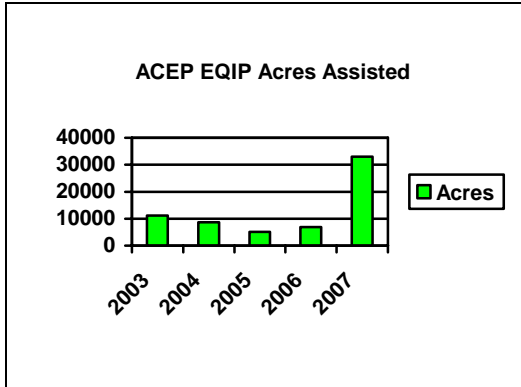
The air quality program has been actively participating at local air quality stakeholder's meetings such as EPA Region IX Best Achievable Control Measures (BACM), ADEQ's Regional Haze and Natural Events meetings, Maricopa County rule 310 public process and Air Quality Summit, Maricopa County Association of Governments (MAG) Air Quality Technical Committee Meetings for the EPA 5% reduction of particulate matter (PM10) plan, Pinal County PM10 reduction stakeholder group, and the Ag BMP Governor's Committee booklet revision group that has been working on a revised version of the booklet. Agricultural outreach and education presentations have been made to the Colorado River Indian Tribes (CRIT) about air quality. ACT staff developed an informational article about agricultural dust during high wind events, which was published by The Arizona Farm Bureau Federation, reaching up to 4,000 readers.

## ***Agricultural Conservation Education Program (ACEP)***

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

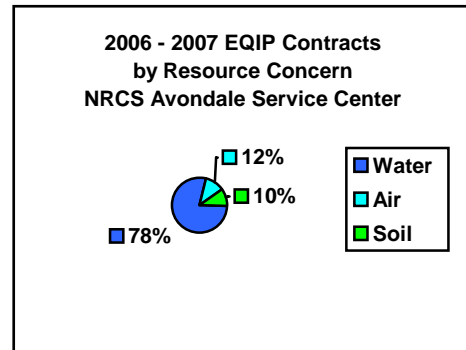
In September 2002, ACT entered into a Contribution Agreement with the United States Department of Agriculture Natural Resources Conservation Service (NRCS) to create the Comprehensive Nutrient Management Plan (CNMP) Assistance Program. That program's goal was to serve multiple organizations by addressing: 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 (AFOs) with the development of required nutrient management plans (NMPs).



Previously, according to the AZPDES Permit, any AFO that is considered a concentrated animal feeding operation (CAFO) must apply for the Permit and comply with its requirements no later than July 2007. On February 28, 2005 the United States Court of Appeals for the Second Circuit Court found that the duty to apply, which the Agency had based on a presumption that all CAFOs have at least a potential to discharge, was invalid, because the CWA subjects only actual discharges to regulation rather than potential discharges.

Due to the changes in CNMP requirements and the increased focus on conservation, NRCS and ADA decided to expand the CNMP position to an all encompassing conservation planner position. This position and the program were redesigned to assist NRCS with the steadily increasing workload of managing Farm Bill programs including Environmental Quality Incentives Program (EQIP), Wildlife Habitat Incentive Program (WHIP), Grazing Lands Conservation Initiative (GLCI), and Conservation Security Program (CSP). The broad scope of the position requires extensive conservation training in specialized areas such as agricultural waste management, pest & nutrient management and water quality. This collaborative effort between NRCS and ADA provides Arizona's agricultural producers with more resources for compliance and educational assistance.



### *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 IX, several Natural Resource Conservation Districts, The University of Arizona Cooperative Extension, the Arizona Department of Environmental Quality and the Arizona Department of Agriculture. The Agricultural Conservation Education Program (ACEP) chairs the CAFO Education Group and facilitates quarterly meetings, whose group efforts are funded through the Contribution Agreement with NRCS and ADA.

Also through the CAFO Education Group the UDA created the standing UDA Environmental Committee. A workshop was organized which covered the EPA's role on the CAFO Program and the changes in the CAFO rule, air issues in Pinal County regarding CAFO's and opportunities for NRCS and ADEQ's CAFO program. As a result of this workshop the UDA members requested these educational meetings be held on a yearly basis and a sub-committee was formed to work on a reference guide highlighting the regulatory requirements to operate an existing dairy, to open a new dairy and close or move an existing dairy.

During fiscal year 2007, ACEP and the CAFO Education Group began the development of the 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 2008. ACEP will manage and update this guide on a yearly basis. Other educational outreach provided by 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 appointed evaluation committee, and a public comment and hearing period. The second grant cycle began in fiscal year 2007.

During fiscal year 2007, ACT personnel conducted three public hearings statewide to solicit public comment on the proposed grant

program guidelines and criteria. As a result, the following types of projects were considered for funding during 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).
- 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.



In addition to public hearings, ACT personnel conducted four informational workshops statewide to provide potential applicants with a general grant program overview and information on how to apply for funds. Approximately 100 people attended the four workshops.

Due to the program running on a biennial grant cycle, the ADA had approximately \$4 million available in grant funds for the fiscal year 2007 grant cycle. The 2007 funding cycle application deadline was March 16, 2007. The ADA received 93 applications totaling \$11.1 million. Seventy grants were approved totaling approximately \$4.4 million.

All eligible grant applications were reviewed by a five member Evaluation Team consisting of individuals representing the cattle and crop industries, the conservation community, and the universities. The evaluation process was completed in June and recommendations for funding will be sent to the ADA's Director in July. Once funding recommendations are approved by the Director, grant awards will be announced and ACT personnel will begin working on grant contracts with the awardees.



***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.***

In addition to the new grant cycle, the LCCGP coordinator has continued to promote the program, as well as administer the existing grant contracts from the fiscal year 2005 grant cycle. 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 2007, twenty-one of the fifty-six grantees from the fiscal year 2005 cycle have completed their proposed grant projects.

Throughout fiscal year 2007, 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.



## *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 and specialty crops.

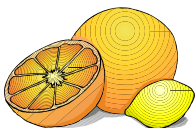


Approximately \$6,895,000.00 in funding was available for each of federal fiscal years 2006 and 2007. Each state department of agriculture that submitted an application that was approved received a base grant of \$100,000. In addition, the Agricultural Marketing Service (AMS) allocated the remainder of the grant funds based on the proportion of the value of specialty crop production in the state. The 2006 and 2007 base grant amounts plus the value of production available to Arizona was \$133,290.44 per year. ADA elected to apply for both 2006 and 2007 funding amounts in the current grant cycle as permitted by AMS.

The Arizona Department of Agriculture's Specialty Crop Block Grant Program (SCBGP) is administered by the ACT program. With the assistance of stakeholders the ACT program developed and distributed a SCBGP grant manual. Twenty-two applications requesting a total of \$548,000.00 were received by the May 16, 2007 deadline. Proposals encompassed research, education, and marketing. A seven member evaluation team, made up of agricultural industry and university representatives, met on June 5, 2007 to review applications and recommend projects for funding to Director Donald Butler. Eleven projects totaling \$240,000.00 were recommended and approved for funding and have been incorporated into the Arizona Specialty Crop State Plan for submission to AMS. ACT has also included an internal department project in the state plan which will be paid for with administrative funds as sanctioned by AMS. During fiscal year 2008, the department will produce an Arizona Specialty Crop Reference Guide focusing 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. Upon approval of the state plan by AMS, ACT personnel will make grant award announcements and begin the preparation of grant agreements with awardees.

Throughout the duration of the SCBGP projects, which can be up to three years in length, ACT personnel will work with awardees to provide assistance with funding advance requests and quarterly reimbursements. ACT personnel will also conduct periodic monitoring of grant projects to ensure the success of the program and compliance with guidelines.

## *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 three 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 seven producers appointed by the Governor:

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

In fiscal year 2007, the Council continued its work with research institutions to coordinate industry research needs. Council members approved more than \$21,000 in research grants.

Due to a statutory change, as of September 19, 2007 the Council will be comprised of five producers appointed by the Governor. The legislation also changed the district representation to: two producers from district one; one producer from district two; and two producers at large.

**Fiscal Year 2007 Financial Status - Arizona Citrus Research Council**

|          |             |
|----------|-------------|
| Revenue  | \$54,220.24 |
| Expenses | \$45,270.73 |

*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) 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)
- One producer from district two (including the remainder of iceberg lettuce producing areas in the State)
- Two 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 production, harvesting, handling and transporting lettuce from fields to markets. During fiscal year 2007, the council approved over \$80,000 in research grants. Some examples of research grant projects include the development of effective management tools for lettuce disease, insect management for desert lettuce, breeding high quality lettuce for arid climates, a survey of exposure estimates of uranium in desert lettuce, and a preliminary survey of coliform bacteria in irrigation canal waters.

Due to a statutory change, as of September 19, 2007 the Council will consist of four producers from district one and three producers at large.

**Fiscal Year 2007 Financial Status-Arizona Iceberg Lettuce Research Council**

|          |              |
|----------|--------------|
| Revenue  | \$91,501.06  |
| Expenses | \$99,398.69* |

\*The Lettuce Council fund balance is more than adequate to cover the difference between expenses and revenues in fiscal year 2007.

## 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 \$35,500 was spent on research projects during fiscal year 2007.

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.

Due to a statutory change that exempts the council from the state grant solicitation and award procedures, A.R.S. §41-2702, the Council filed a notice of Final Rulemaking on December 22, 2006, which codifies their grant solicitation and award process.

### **Fiscal Year 2007 Financial Status - Arizona Grain Research and Promotion Council**

|          |               |
|----------|---------------|
| Revenue  | \$111,033.63  |
| Expenses | \$118,308.86* |

\*The Grain Council fund balance is more than adequate to cover the difference between expenses and revenues in fiscal year 2007.

## 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 met several times throughout the fiscal year. With the assistance of an employment relations attorney, the Board completed the development of procedures manuals as well as

training for Board members and staff to help facilitate their statutory obligations. The Board requested bi-annual refresher training courses to keep members and staff up to date.

In May of 2007, an Unfair Labor Practice charge was filed with the Board. The charge is currently under investigation.

### *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. Since September of 2003, the ADA has entered into annual agreements with the United States Department of Agriculture Natural Resources Conservation Service 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. The same legislation requesting funding that was introduced in the 2006 legislative session was re-introduced in the 2007 session. The attempt to secure funding for the program was again unsuccessful. In anticipation of funding, the Commission will continue 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.

| <b>Summary of Laboratory Testing Functions</b> |  |
|--|--|
| <b>Biology</b>                                 |  |
| 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.           |
| <b>Chemistry</b>                 |  |
| 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 FY2007, 401 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 FY2007 the Biology Section of the lab provided 8,124 identifications on specimen submissions. This included 36 botany identifications; 6,462 entomology identifications; 561 nematode identifications; and 1,065 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 FY2007, the laboratory performed 7,698 microbiological and 97 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 304 tests for food-borne pathogens were performed in FY2007.

## *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 12,402 blood and milk samples from domestic and exotic animals for the Brucellosis Eradication Program in FY2007. 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 total of 153,631 cattle blood samples were collected and shipped to the Lubbock laboratory for testing in FY2007.

## Chemistry

### *Our Customers*

During FY2007, 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.

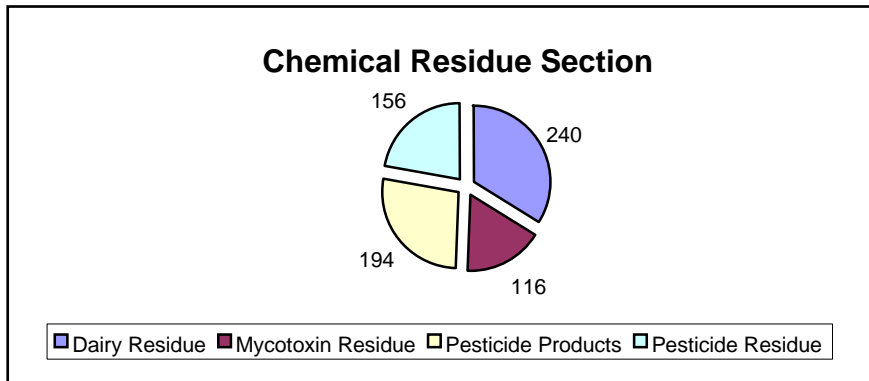
### *Protection for Milk*

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 35 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 FY2007, 962 analyses were performed on 446 fertilizer products and 408 tests were conducted on 223 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 104 analyses during FY2007, 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 Division is made up of three sections. The first section is Licensing, which provides licensing services for the agency. The licenses can be used as a regulatory tool and by dispersing them from one location

uniform customer service and proper cash handling is ensured. The Compliance section conducts field inspections and complaint follow-up to monitor proper use of pesticides and enforce worker safety requirements. Compliance also implements the non-food quality assurance program which protects consumers from unsafe or poor quality products. This is done through reviewing labels and inspecting stores where these products are sold, as well as taking samples of feed, fertilizer, pesticide and seed for analysis at the State Agricultural Laboratory to ensure product quality. The last is the Office of Special Investigation, which ensures effective investigation of agricultural crimes relating to department statutory authorities.

### *Staff Allocations*

The Environmental Services Division (ESD) had 35.5 full-time employee positions as of June 30, 2007.

## Centralized Licensing and Registration

The centralized Licensing Section processes approximately 96 percent of licenses issued by the department. Office hours are from 8:00 a.m. to 5:00 p.m. After 4:30 p.m., paperwork is accepted but the issuance of the corresponding license may not occur until the following day. The best way to get needed forms for licensure application is to access our home page at [www.azda.gov](http://www.azda.gov).

The Department of Agriculture is committed to providing excellent customer service on a timely basis. This is 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 the \$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 \$25 for dealers and \$40 for labelers. Approximately one-half of the seed fees collected are used to fund half a position at the State Agricultural Laboratory to perform seed quality analysis.

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 2007, \$981,600 in fees was collected for the WQARF: \$39,200 in fertilizer fees and \$942,400 in pesticide registration fees.

### *Licensing 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 continuing education units each year. Those holding private certification are required to earn three units 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 2007 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 822. The number of training sessions which were approved for the year was 354. The University of Arizona Cooperative Extension Service sponsored 38 of these training sessions and 288 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 between 8:00 a.m. - 4:00 p.m., Monday through Friday at 1688 West Adams Street, to schedule an appointment call (602) 542-3578. For people outside the Phoenix-metro area, contact should be made with the local inspector to arrange testing.

### *Exams Administered in FY 2007*

| TYPE OF EXAM                | Total Exams | Number Passed | Number Failed | Passing Rate |
|-----------------------------|-------------|---------------|---------------|--------------|
| Aerial Applicator (AAP)     | 3           | 3             | 0             | 100%         |
| Commercial Applicator (PUC) | 208         | 185           | 23            | 89%          |
| Custom Applicator (CAA)     | 5           | 5             | 0             | 100%         |
| Pest Control Advisor (PCA)  | 36          | 27            | 9             | 75%          |
| Private Applicator (PUP)    | 89          | 81            | 8             | 91%          |
| Fumigant Endorsement        | 5           | 2             | 3             | 40%          |
| Milk Sampler & Hauler       | 106         | 90            | 16            | 85%          |
| Cottonseed Sampler          | 0           | 0             | 0             | N/A          |
| <b>TOTALS</b>               | <b>452</b>  | <b>393</b>    | <b>59</b>     | <b>87%</b>   |

The following chart represents the total number of licenses, permits and certificates issued by the Licensing Section during FY 2007:

| <b>Licenses and Registrations Issued in FY 2007</b> |        |
|---|--------|
| Pesticide - Total Pesticides Registered             | 11,669 |
| Agriculture Use Pesticides                          | 2,593  |
| Non-Agricultural Use Pesticides                     | 9,076  |
| Fertilizer - Licensed Fertilizer Companies          | 324    |
| Specialty Fertilizers                               | 2,544  |
| Feed - Licensed Feed Companies                      | 581    |
| Seed Dealers  | 1,324  |
| Seed Labelers                                       | 180    |

|                                   |        |
|-----------------------------------|--------|
| Dairy/Milk Industry Licenses      | 365    |
| Aquaculture Licenses              | 56     |
| Egg & Egg Products                | 92     |
| Meat Industry Licenses            | 232    |
| Livestock Brand Certificates      | 1,848  |
| Equine Certificates Issued        | 392    |
| Certificates of Free Sale         | 82     |
| Products Certified for Free Sale  | 5,292  |
| Native Plant Permits Issued       | 580    |
| Number of Native Plants Permitted | 93,663 |

The Pesticide Credentials program has transitioned through the staggered renewal cycles to a uniform annual date of December 31. Many growers chose the 2 year license option so the numbers reported for this annual report do not represent the total of over 1,100 growers licensed in Arizona. The following chart represents the total number of pesticide use related licenses issued during the 2007 fiscal year. Other licenses set to expire on December 31 are aquaculture, meat, dairy and pesticides. This brings an additional 12,000 licenses up for renewal during the same time frame. Additionally, feed and fertilizer tonnage reports will also be due for the fourth quarter of 2007. As the result of additional planning and cross-training, we are confident that we will be able to provide the timely service that our customers have grown accustomed to.

| <b>Pesticide Use Related Credential Summary FY 2007</b> |     |
|---|-----|
| Grower Permits (PGP)                                    | 534 |
| Pesticide Sellers (PSP)                                 | 185 |
| Ag Aircraft Pilots (AAP)                                | 47  |
| Custom Applicators (CAA)                                | 55  |
| Equipment Tags  | 675 |
| Pest Control Advisors (PCA)                             | 207 |
| Private Applicators (PUP)                               | 408 |
| Commercial Applicators (PUC)                            | 295 |
| Pesticide Responsible Individual (PRI)                  | 5   |

| <b><i>Fertilizer Tonnage FY 2007</i></b> |        |         |                  |
|--|--------|---------|------------------|
| Dry                                      | Bulk   | Liquid  | Total            |
| 121,180                                  | 99,109 | 281,276 | 501,556          |
| <b><i>Feed Tonnage FY 2007</i></b>       |        |         | <b>Total</b>     |
|  |        |         | <b>1,183,578</b> |

## Pesticide Compliance and Worker Safety

The Compliance Section has ten inspectors, five Industrial Hygienists and five Pesticide Control Inspectors, who conduct different types of health and safety inspections at 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 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 misuse 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 complaint 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*

To report pesticide misuse, contact the Pesticide Emergency Hotline at 1-800-423-8876. 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.

### *Restricted Use Pesticides*

Inspections are conducted at pesticide marketplaces to ensure that pesticides are properly registered with the state and the EPA. Pesticides that have been manufactured in other countries and illegally imported into Arizona are sometimes found during these inspections. Many foreign-made pesticides 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 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.

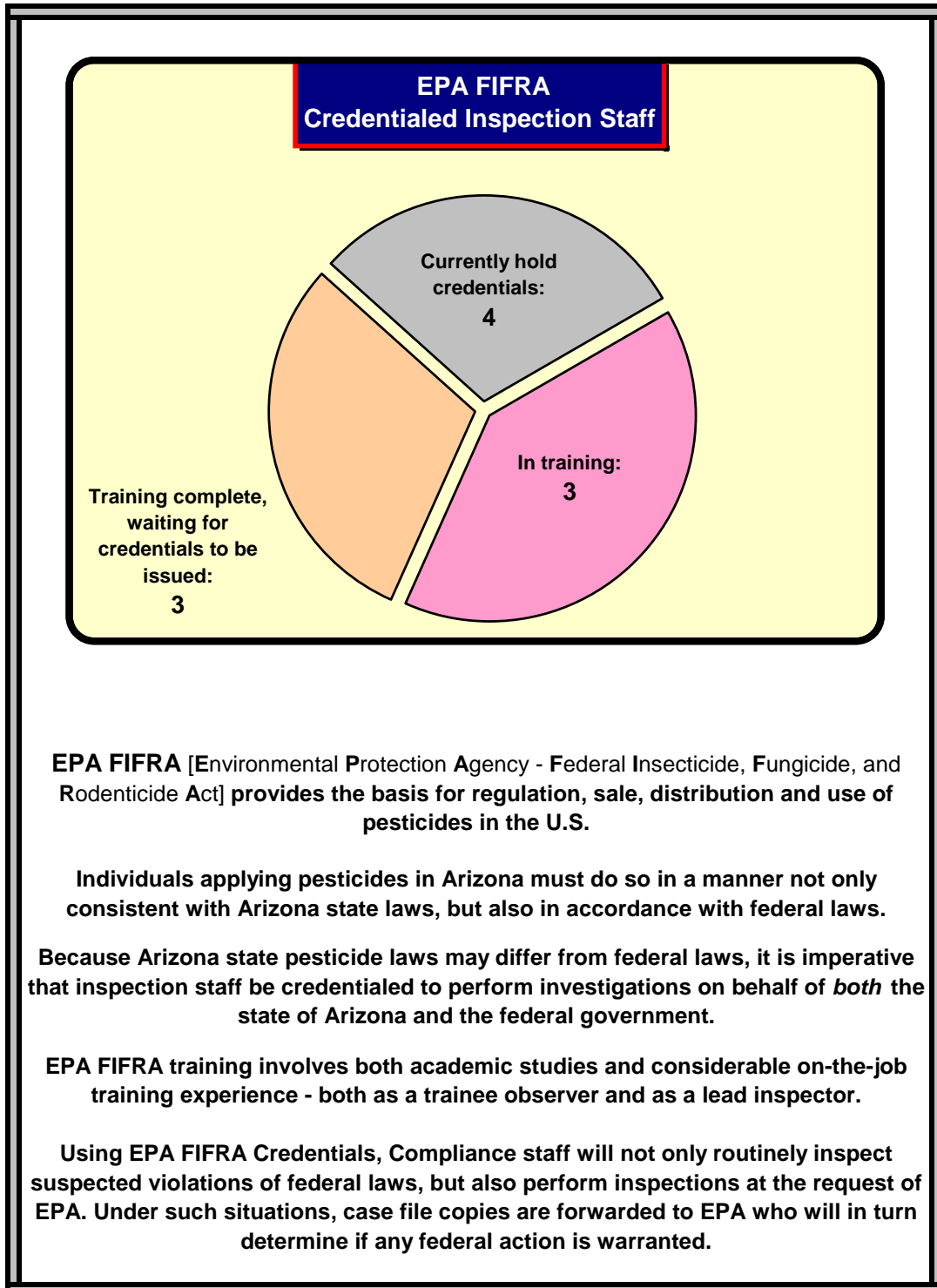
### *Agricultural Worker Safety*

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 WPS 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, thereby gaining trust and credibility.



## 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.

**Annual AZ Nursery Association - Safety Day** - Both ESD and ACT staff attended. Maricopa County Extension Center, Phoenix, AZ - November 30, 2006

**28th Annual Wilcox Ag. Day** - The Compliance Manager spoke to those in attendance. Wilcox, AZ - February 7, 2007

**The Arizona Interagency Farmworkers Coalition Conference: "Establishing rows of Communication in our Farmworker Communities."** Attended by three Compliance Industrial Hygienists. Yuma, AZ - March 7-9, 2007

**Yuma County Farm Workers Coalition - The Farm Worker Summer Institute** - Attended by Compliance Industrial Hygienists. San Luis, AZ - June 8, 2007



## Train The Trainer [TTT] Workshops

The Worker Protection Standard (WPS) Train The Trainer (TTT) program trains and qualifies individuals to be trainers of field workers and pesticide handlers in regard to pesticide safety. The program is conducted by Environmental Services Division (ESD) 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 state fiscal year 177 participants satisfactorily passed the certification test, and were issued cards to train 15,828 agricultural workers and 7,195 pesticide handlers.

**Joint Arizona / California Tribal TTT Workshop (Spanish)** - Salinas, CA - July 11 & 12, 2006. 88% of the 26 attendees that took the exam, passed.

**Joint Arizona / California Tribal TTT Workshop (English)** - Salinas, CA - July 13 & 14, 2006. 100% of the 21 attendees that took the exam, passed.

**TTT Workshop (Spanish)** - Somerton, AZ - November 15, 2006. 90% of 23 attendees passed the exam.

**TTT Workshop (English)** - Somerton, AZ - November 16, 2006. 100% of 17 attendees passed the exam.

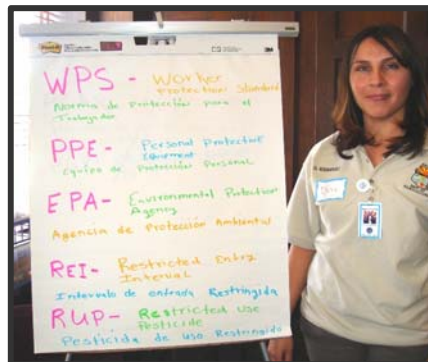
**TTT Workshop (English)** - Safford, AZ - February 20, 2007. 100% of 18 attendees passed the exam.

**Joint Arizona / California Tribal TTT Workshop (Spanish)** - Yuma, AZ - March 13 & 14, 2007. 91% of the 35 attendees passed the exam.

**Joint Arizona / California Tribal TTT Workshop (English)** - Yuma, AZ - March 15 & 16, 2007. 100% of the 22 attendees that took the exam, passed.

**TTT Workshop (Spanish)** - Phoenix, AZ - May 3, 2007. 56% of 9 attendees passed the exam.

**TTT Workshop (English)** - Phoenix, AZ - May 4, 2007. 100% of 29 attendees passed the exam.



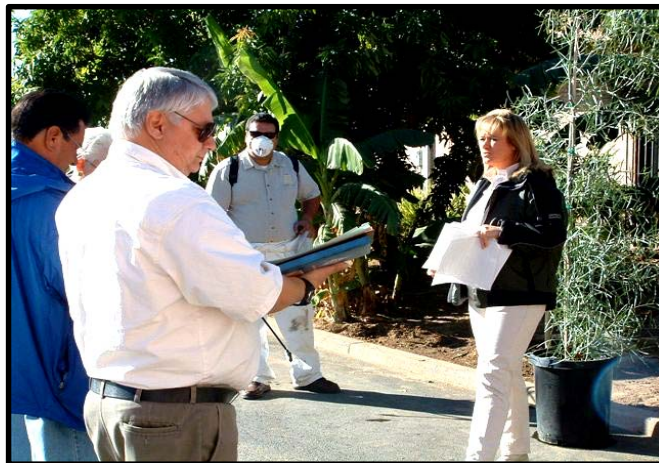
## General Training Programs & Workshops

Management and inspection staff from the Environmental Services Division (ESD) conduct a wide spectrum of training programs throughout the year. Some programs are conducted in cooperation with Agricultural Consultation & Training (ACT).

**Annual AZ Nursery Association - Safety Day** - Both ESD and ACT staff participated in training sessions. Maricopa County Extension Center, Phoenix, AZ - November 30, 2006

**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 (CEU's) for attending the full day course. Yuma, Safford, Maricopa, Phoenix, AZ - December 11-15, 2006

**Pesticide Regulatory Education Program (PREP)**. Compliance Manager spoke on state and tribal relationships and the current cooperative relationship with Tribes in Arizona. Sacramento, California - April 16-17, 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.

### Attended by Compliance Manager

**20th Annual meeting of the Association of American Seed Control Officials (AASCO).** Billings, Montana - July 22-26, 2006

**Annual Convention of The Association of American Feed Control Officials (AAFCO).** Oklahoma City, Oklahoma - August 4-7, 2006

**Understanding the Dangers of Agro Terrorism - Part 1 & 2.** Rio Rico & Phoenix, Arizona - October 19 & November 1, 2006

**EPA's Enforceable Endangered Species Protection Program (ESPP).** Phoenix, Arizona - November 15 & 16, 2006

**Pandemic Flu an the Avian Flu Conference.** Tempe, Arizona - November 20, 2006

**EPA Region IX Pre-SFIREG Meeting.** San Francisco, California - November 27, 2006

**Association of American Feed Control Officials (AAFCO) Midyear Meeting.** Savannah, Georgia - January 16-18, 2006

**PREP High Visibility Pesticide Incident Course.** El Paso, Texas - May 7-11, 2006

**Western Region Pesticide Meeting.** Portland, Oregon - May 15-17, 2006

**Seed Trade Association of Arizona.** Yuma, AZ - June 20, 2007

### Attended by at least one staff member

**Pesticide Inspector Residential Training (PIRT).** Cartersville, Georgia - August 13-16, 2006

**AAFCO Advanced Feed Inspector Training.** Bass Lake, California - October 3-5, 2006

**S.W. AG Summit.** Tucson, Arizona - March 8, 2007

**EPA Pesticide Inspector Training.** Oakland, California - March 15, 2007

**CLEAR Training.** Albuquerque, New Mexico - April 3-6, 2007

**2007 EPA Region IX Pesticides Inspector Workshop.** Oakland, California - April 17-19, 2007

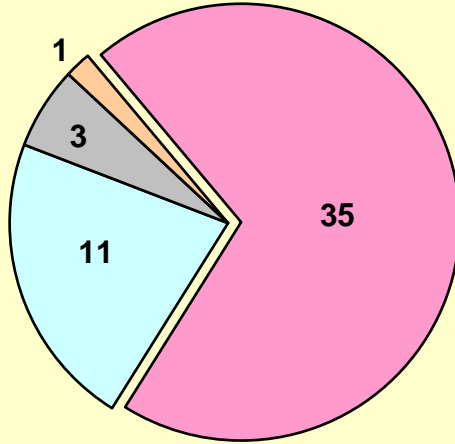
**Pesticide Applicators Professional Association (PAPA) Seminar.** Holtville, Georgia - May 3&4, 2007

**Desert AG Conference.** Casa Grande, Arizona - May 9&10, 2007



**Worker Protection & Safety  
Origin of Assigned Investigation Cases**

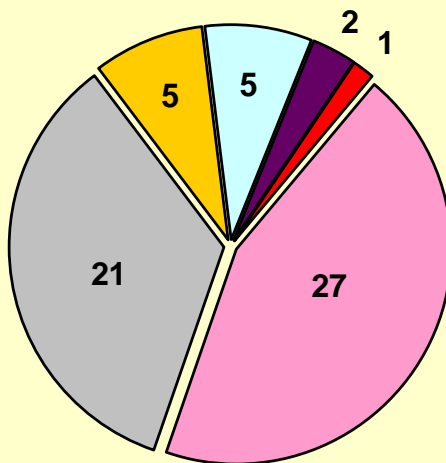
**Total No. of Cases  
Opened: 50**



- Routine Inspections
- Field Surveillance
- Follow-up 3rd Party Complaints
- Other Government Agency Referrals

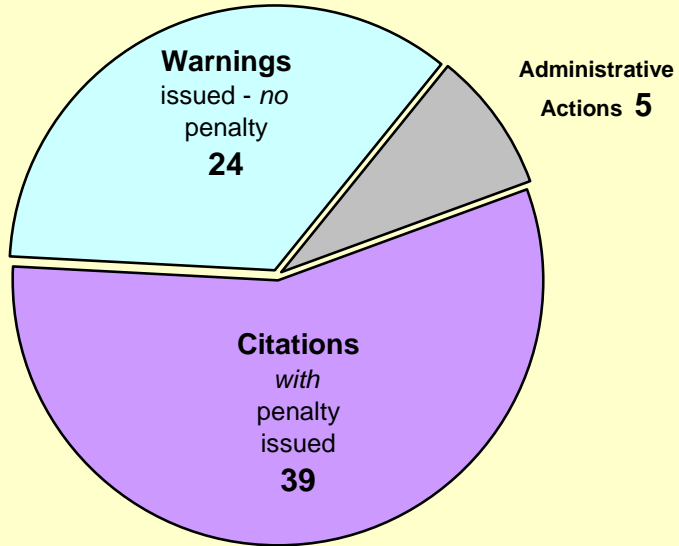
**Pesticide Control (USE)  
Origin of Assigned Investigation Cases**

**Total No. of Cases  
Opened: 61**

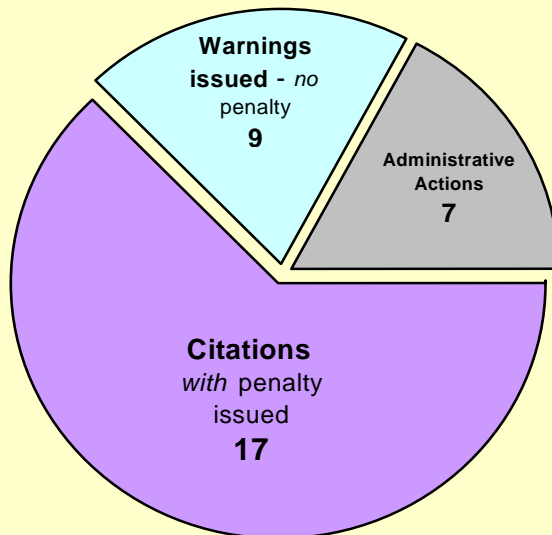


- Routine Inspections
- Follow-up 3rd Party Complaints
- 1080 Pest. Application Report Reviews
- Field Surveillance
- Division Generated
- Monitoring Pesticide Applications

**Worker Protection & Safety  
Assigned Investigation Actions**

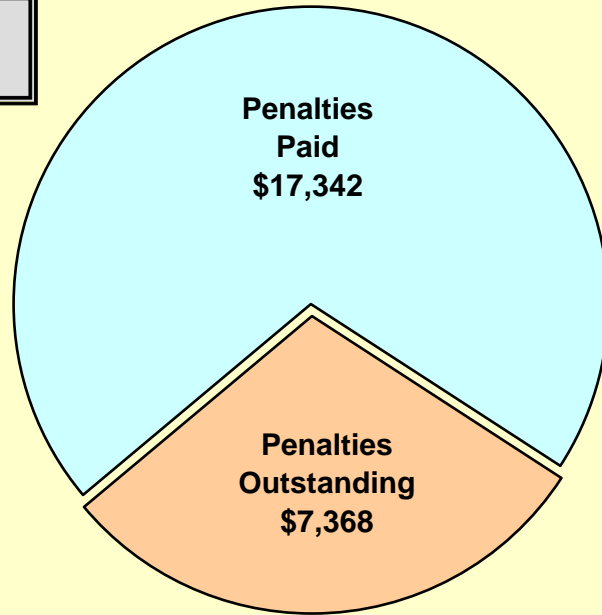


**Pesticide Compliance (USE)  
Assigned Investigation Actions**



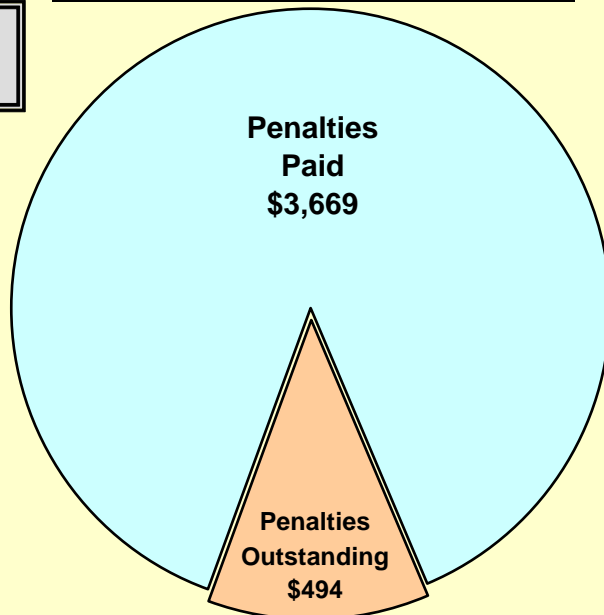
**Worker Protection & Safety  
Assigned Investigation Penalties**

Penalties  
Assessed  
\$24,710



**Pesticide Compliance (USE)  
Assigned Investigation Penalties**

Penalties  
Assessed  
\$4,163



**Worker Safety & Pesticide Use**  
*Complaints Received or Violations Observed*

————— **Complaints / Violations** —————      **Number of Cases**

|                                    |   |           |
|------------------------------------|---|-----------|
| <b>Pesticide Control (USE)</b>     | Restricted Use Pesticide Recordkeeping                      | <b>10</b> |
|                                    | Operating without a Regulated Grower Permit (PGP)           | <b>9</b>  |
|                                    | Pesticide Misuse  | <b>9</b>  |
|                                    | Pesticide Storage / Disposal                                | <b>7</b>  |
|                                    | Pesticide Exposure resulting from drift / overspray         | <b>6</b>  |
|                                    | Noise / Over-flight   | <b>4</b>  |
|                                    | Drift / Overspray   | <b>3</b>  |
|                                    | Health Effects  | <b>3</b>  |
|                                    | Use of Fumigant without certification                       | <b>3</b>  |
|                                    | Crop Damage   | <b>2</b>  |
|                                    | Illegal Pesticide Sales                                     | <b>1</b>  |
|                                    | Over-tolerance on food crop                                 | <b>1</b>  |
|                                    | Use of Unregistered Pesticide                               | <b>1</b>  |
|                                    | Pesticide Dumping   | <b>1</b>  |
| 1080 Pesticide Application Reports | <b>1</b>  |           |
| <b>Worker Safety</b>               | Multiple WPS Violations                                     | <b>33</b> |
|                                    | Pesticide Safety Training                                   | <b>9</b>  |
|                                    | Central Posting   | <b>3</b>  |
|                                    | Pesticide Application List                                  | <b>2</b>  |
|                                    | Pesticide Exposure / Violation of Restricted Entry Interval | <b>2</b>  |
|                                    | Personal Protective Equipment missing or not used           | <b>1</b>  |

## ESD Actions on Complaints and Inspections

*Worker Safety & Pesticide Use*

Incidents

Number of  
Incidents

| Worker Safety        |   |    |
|----------------------|---|----|
|                      | Failure to Train  | 28 |
|                      | Failure to Verify Training  | 28 |
|                      | Application List Not Provided / Posted / Incomplete                       | 24 |
|                      | Safety Poster Not Posted / Illegible / Inaccessible                       | 16 |
|                      | Medical Emergency Information Not Posted / Missing / Incomplete           | 16 |
|                      | Label Violation - Storage / Disposal / Transport / General Misuse         | 10 |
|                      | Central Posting - Missing / Incomplete / Inaccessible                     | 9  |
|                      | Operating Without a Valid License   | 8  |
|                      | Decontamination Site Not Provided   | 8  |
|                      | Oral / Written Warnings   | 4  |
|                      | Failure to Wear Required Personal Protective Equipment / Safety Equipment | 3  |
|                      | Personal Protective Equipment / Safety Equipment Not Provided             | 3  |
|                      | Violation of Restricted Entry Interval                                    | 3  |
|                      | Unsafe Environment  | 1  |
|                      | No Warning Signs Posted / Signs Not Removed                               | 1  |
|                      | No Worker Card  | 1  |
|                      | Training Records  | 1  |
| <b>Pesticide USE</b> | Label Violation   | 13 |
|                      | Record Keeping  | 7  |
|                      | Drift / Overspray   | 6  |
|                      | Container Disposal / Storage  | 5  |
|                      | Operating Without a Valid License   | 4  |

## Non-Food Quality Enforcement Actions

| FERTILIZER                                      | Number        |
|---|---------------|
| <b>TOTAL NUMBER OF CASES OPENED</b>             | <b>54</b>     |
| Follow-up third-party complaints                | 5             |
| Routine Inspections                             | 49            |
| <b>FERTILIZER PENALTIES ISSUED</b>              | <b>16</b>     |
| Total   | \$3,205       |
| Paid to date                                    | \$2,334       |
| <b>CEASE &amp; DESIST ORDERS ISSUED</b>         | <b>43</b>     |
| Quality Assurance Analysis Failures             | 23            |
| Unlicensed Commercial Fertilizer Company        | 3             |
| Unregistered Specialty Fertilizer               | 13            |
| Both Unlicensed Company & Unregistered Products | 1             |
| False / Misleading Statements                   | 3             |
| <b>WARNINGS / NOTICE OF VIOLATIONS ISSUED</b>   | <b>52</b>     |
| Quality Assurance Analysis Failures             | 26            |
| Unlicensed Commercial Fertilizer Company        | 6             |
| Unregistered Specialty Fertilizer               | 18            |
| Both Unlicensed Company & Unregistered Products | 2             |
| <b>COMMERCIAL FEED</b>                          | <b>Number</b> |
| <b>TOTAL NUMBER OF CASES OPENED</b>             | <b>91</b>     |
| Follow-up third-party complaints                | 3             |
| Routine Inspections                             | 86            |
| Referrals                                       | 2             |
| <b>CEASE &amp; DESIST ORDERS ISSUED</b>         | <b>50</b>     |
| Quality Assurance Analysis Failures             | 22            |
| Unlicensed Commercial Feed Company              | 26            |
| Misbranding / Mislabeling                       | 1             |
| Adulterated Product                             | 1             |
| <b>WARNINGS / NOTICE OF VIOLATIONS ISSUED</b>   | <b>88</b>     |
| Quality Assurance Analysis Failures             | 21            |
| Unlicensed Commercial Feed Company              | 65            |
| Misbranding / Mislabeling                       | 1             |
| Adulterated Product                             | 1             |



## Non-Food Quality Enforcement Actions

| SEED                                | Number    |
|-------------------------------------|-----------|
| <b>TOTAL NUMBER OF CASES OPENED</b> | <b>34</b> |
| Follow-up third-party complaints    | 5         |
| Routine Inspections                 | 27        |
| Referrals                           | 2         |

|   |           |
|---|-----------|
| <b>CEASE &amp; DESIST ORDERS ISSUED</b>     | <b>43</b> |
| Quality Assurance Analysis Failures - Total | 14        |
| <i>Germination Failures</i>                 | 3         |
| <i>Purity Failures</i>                      | 11        |
| Unlicensed Seed Dealer                      | 1         |
| Unlicensed Seed Labeler                     | 3         |
| Noxious Weed Seed                           | 20        |
| Expired Test Date                           | 5         |

|   |           |
|---|-----------|
| <b>WARNINGS / NOTICE OF VIOLATIONS ISSUED</b> | <b>45</b> |
| Quality Assurance Analysis Failures - Total   | 14        |
| <i>Germination Failures</i>                   | 3         |
| <i>Purity Failures</i>                        | 10        |
| Unlicensed Seed Dealer                        | 6         |
| Unlicensed Seed Labeler                       | 14        |
| Noxious Weed Seed                             | 11        |
| Expired Test Date                             | 2         |

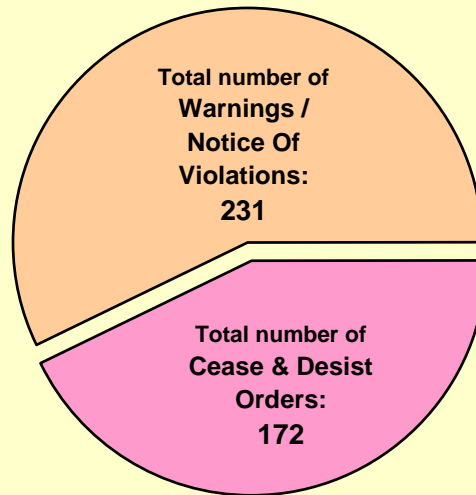
| PESTICIDE                                 | Number    |
|---|-----------|
| <b>TOTAL NUMBER OF CASES OPENED</b>       | <b>66</b> |
| Follow-up third-party complaints          | 2         |
| Routine Inspections                       | 56        |
| Referrals From Other Government Agencies  | 3         |
| Label Review                              | 1         |
| 1080 Pesticide Application Report Reviews | 1         |
| EPA Referral                              | 3         |

|   |           |
|---|-----------|
| <b>CEASE &amp; DESIST ORDERS ISSUED</b> | <b>36</b> |
| Quality Assurance Analysis Failures     | 2         |
| State Unregistered Pesticides           | 32        |
| Federal Unregistered Pesticides         | 1         |
| Illegible Labels                        | 1         |

|   |           |
|---|-----------|
| <b>WARNINGS / NOTICE OF VIOLATIONS ISSUED</b> | <b>46</b> |
| Quality Assurance Analysis Failures           | 1         |
| State Unregistered Pesticides                 | 42        |
| Federal Unregistered Pesticides               | 2         |
| Illegible Labels                              | 1         |

## Non-Food Quality Enforcement Actions

Fertilizer / Commercial Feed / Seed / Pesticide



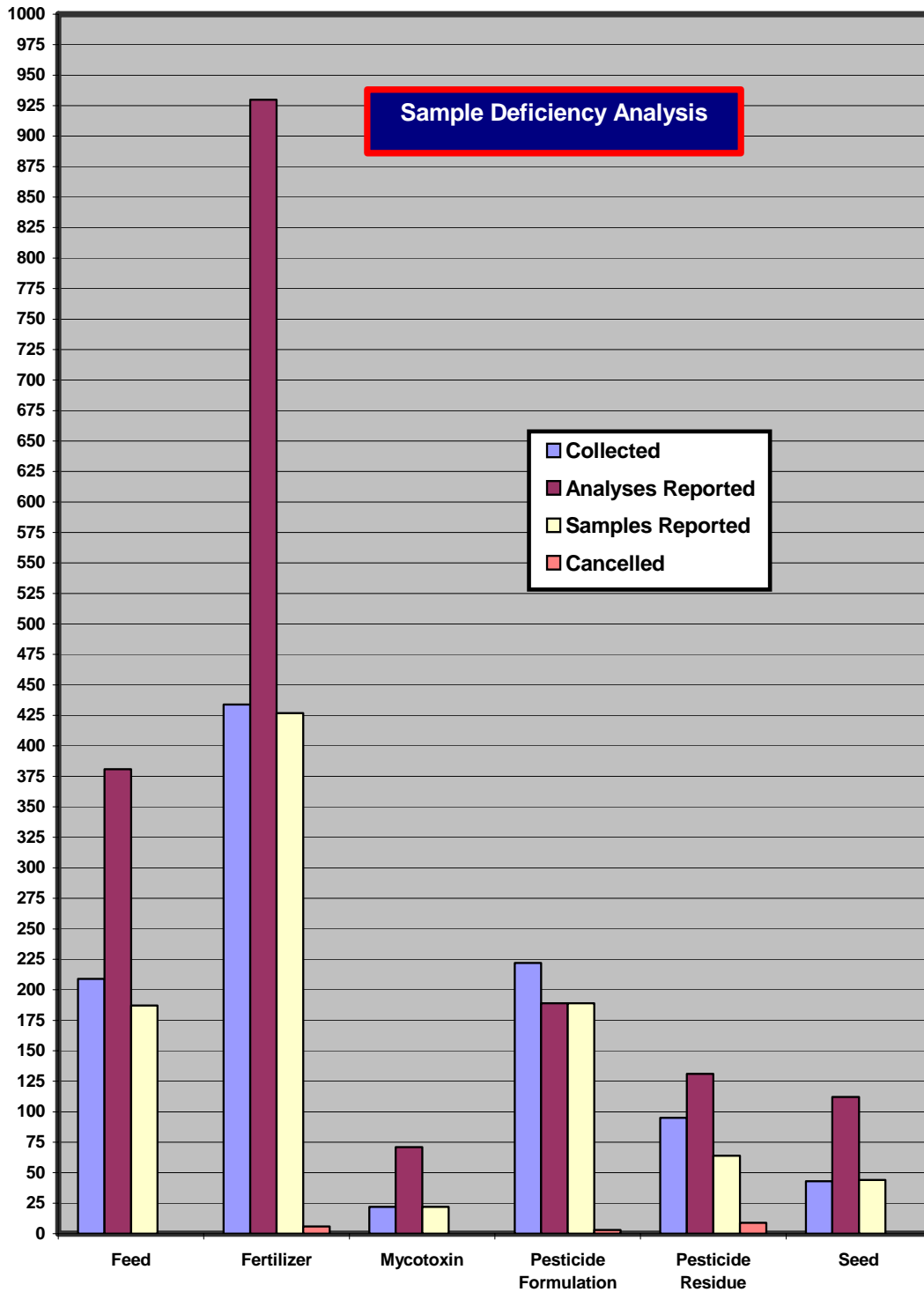
### DEFINITIONS

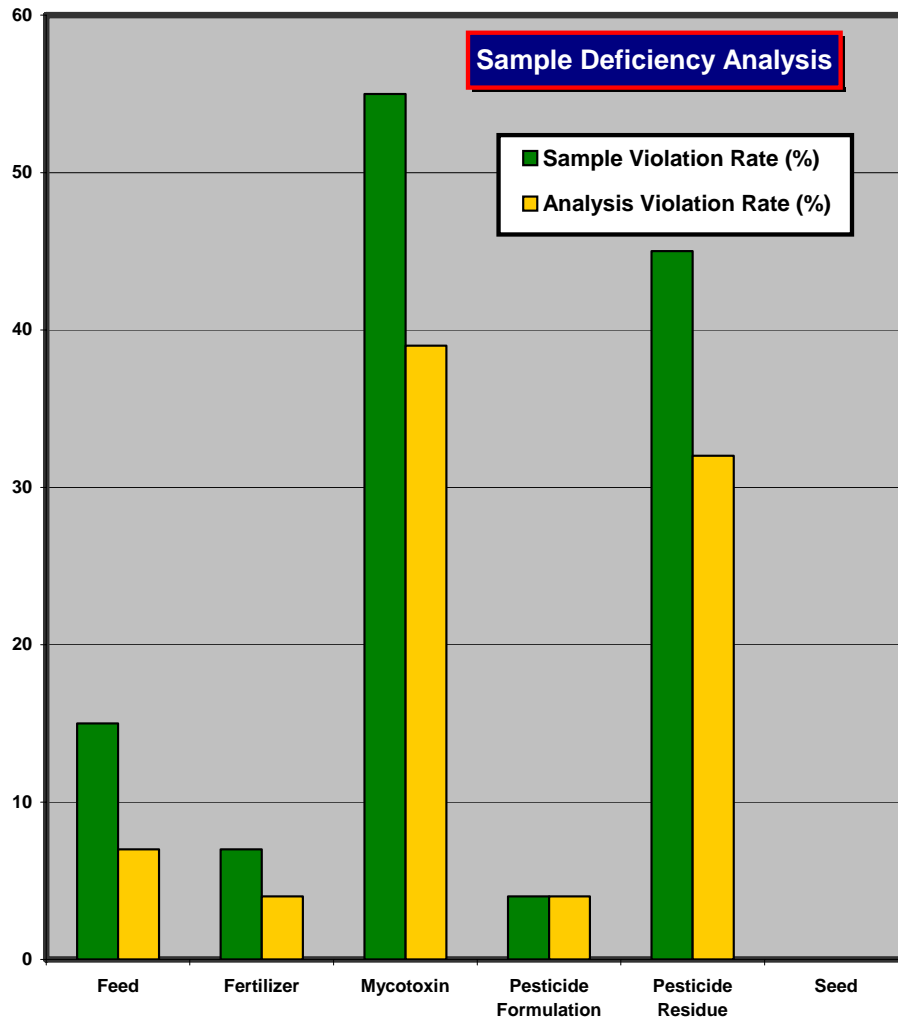
#### Warning / Notice Of Violation (NOV):

Warns a manufacturer or distributor 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.





### *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](http://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 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, wanton killing of livestock, cruelty of livestock; food safety and cultural resource protection. Approximately 2,685 telephone calls, emails and visitors were received by OSI personnel: 1,295 dealt with native plant issues, 960 were livestock related and the remaining 430 calls related to other issues.

### *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 investigation techniques, annual firearms qualifications and various other proficiency requirements. OSI has the responsibility for maintaining training records for all departmental peace officers.

One of the requirements to maintain officer certification is obtaining CEU's. All OSI Investigators attended the 19<sup>th</sup> Annual Conservation Law Enforcement Association Conference held in Prescott, Arizona. This year's conference focused on Officer Survival, which covered the uniqueness of police stress, the work, the dangers associated with the job, the long, irregular hours, the pressures placed upon you to perform at your maximum capacity day after day, and the need to control emotions on a fulltime basis.

All the courses were designed to give each participant the necessary insight into reaching optimal levels of human performance including survival skills. Certified personnel received 14.5 hours of continuing training credits for attending the two day conference.

An OSI investigator attended the annual International Livestock Identification Association (ILIA). This year's ILIA event was held in Helena, Montana. The conference focused on national identification for animals and tracking animal diseases through premise validation and individual testing. This years conference was well attended with 135 individuals present representing fifteen states and three Canadian provinces. Merlyn Carlson, Deputy Undersecretary of the U. S. Department of Natural Resources gave an update on the National Animal Identification System (NAIS). There are currently only two States that have made premise I.D. mandatory and Indiana will be the third in September.

The next segment of the conference was dedicated to electronic brand inspection and voice based data collection. The digital pen is a tool used with the appropriate software that enables you to collect information into the pen as you write and then download that information into the appropriate data storage; i.e., brand inspection records, animal ID records, departmental reports, etc.

The investigator also attended the 34<sup>th</sup> Annual Western State's Livestock Investigators Association (WSLIA) conference. This year's WSLI 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.

An OSI investigator was selected to be part the Arizona Homeland Security Fraudulent Identification Task Force (AFIT). Governor Janet Napolitano implemented "Operation Strong Border, Secure Arizona." 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 36 cases of alleged civil and criminal misconduct involving native plants and livestock. A total of thirteen cases were filed with county attorney offices throughout the state, six of which are either awaiting trial, or pending review. Twelve cases were closed by successful adjudication either by a legal judgment or a written notice of warning. Eleven cases were reviewed and closed due to insufficient evidence.

### *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 programs, and permit issuance.

There were nine cases involving the theft or illegal removal of protected native plant. One case of plant theft is pending trial. Three cases were closed by successful adjudication with the issuance of warning citations. Five cases were reviewed and closed due to insufficient evidence.



*Photo of Saguaro cacti taken from the Saguaro National Park in Tucson*



*Photo of Saguaro cacti being illegally harvested*



## *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. A volunteer equine ownership / hauling certification has the same function. Both types of registration help identify livestock and protect the owner, should the stock become lost or stolen. 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 four cases involving the killing of four head of cattle. One of these cases is pending adjudication. The remaining cases were closed due to insufficient evidence.

There were seven cases involving the theft of thirteen horses and 105 head of cattle. Three cases are still under investigation, four cases were closed due to insufficient evidence.

There were six cases of livestock cruelty involving eight horses. Four cases were closed by successful adjudication, and two cases are still being investigated. Two cases were investigated involving ownership disputes of one horse and one cow. Both cases were settled through civil hearings with favorable outcomes. There were a total of seven citations written involving cruelty to livestock, selling cattle without inspection, improperly maintaining a stallion, violation of health orders and failure to provide medical attention.



Photo of a steer that was seized in a theft case involving a large number of cattle with altered brands as is demonstrated here. The original brand is a lazy D left quarter circle straightaway, which was altered to an A5 straightaway. Once the branding was done it was difficult to determine the alteration.

## *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.

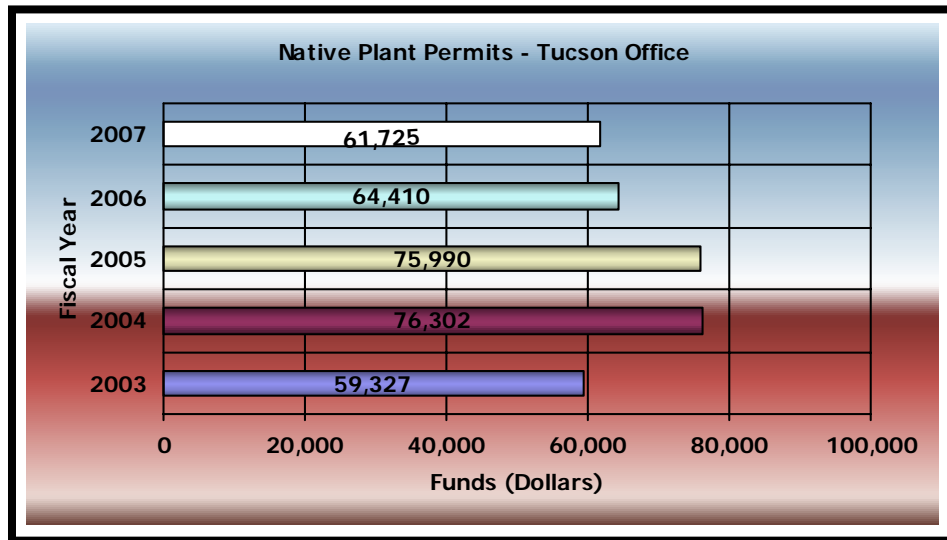
## *Cultural Resource Investigations*

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 assist in the enforcement of the Antiquities Act to protect and preserve evidence of Arizona's richest legacies.

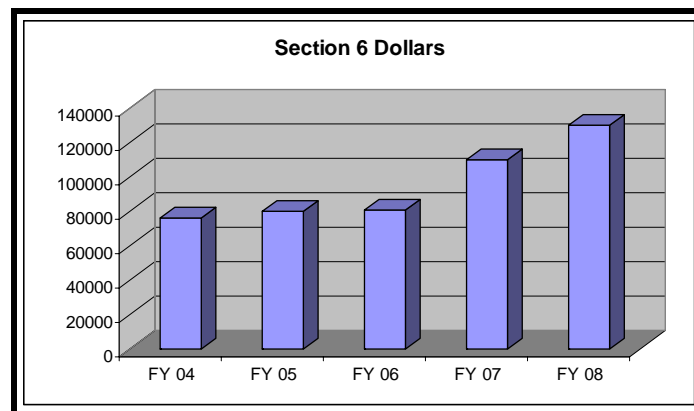
One case involving vandalism and theft of antiquities from State Trust land was conducted with assistance from the State Land Department. The case was closed due to insufficient evidence.

*Native Plant Removal and Transportation Permits and Tags Issued - Tucson Office*

**Five Fiscal Years**



A Memorandum of Understanding between the department and the University of Arizona (U of A) was continued to study threatened and endangered plants species under Section 6 of the Endangered Species Act. A Federal grant totaling \$130,562.00 was received to conduct studies on five different plant species in Arizona. The department passes the money through to researchers working for the U of A who conduct the research. The following table indicates the Section 6 program funding for the last 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.

### *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

- **Light-Brown Apple Moth** – an exotic pest that was recently discovered in California; the larva feeds on a variety of plants important to Arizona, including alfalfa, apple, *Brassica spp.*, grape, citrus, eucalyptus, pyracantha, and privet.



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.



White larvae (grubs) destroying the inside of a pecan



Mature pecan weevil larva exiting a nut

- **Citrus Canker**—results in rapid death of citrus trees. This disease threatens commercial and residential citrus production in Arizona.



- **Red Palm Mite** - a pest of several important ornamental and fruit producing palm species; host plants include areca, date, and queen palms. It causes serious leaf damage, ruining the ornamental value of palms. The pest appeared in Puerto Rico in 2006, and researchers expect it to establish in Florida; Wind currents and the movement of infested nursery stock easily distribute this mite.



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

- **Asian Longhorned Beetle**—this unwanted pest is a threat to urban landscapes. The larval or grub life stage kills young and mature trees by tunneling within the trunk and branches, disrupting sap flow and weakening or killing the tree.



- 
- 
- 

Dead boxelder from beetle infestation



**Workers remove trees infested with Asian Longhorned Beetle, chip downed trees in place, and burn the chips.**

- **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.



Japanese beetle adult



Japanese beetle grubs are destroying this turf by feeding on underground roots

- **Gypsy Moth**—weakens and eventually kills forest trees, affecting the aesthetic value of forested areas.
- **Citrus Greening**—poses a serious potential threat to both Arizona’s residential and commercial citrus; it causes infected trees to yellow, decline, and possibly die within a few years. This disease infects most citrus species, hybrids, and cultivars. Infected trees produce fruit that does not ripen properly, is misshapen and bitter in taste. The Asian citrus psyllid is the vector of citrus greening.



Asian citrus psyllid adult



Symptoms of greening disease on citrus  
- Photograph by University of Florida



- **Cactus Moth**—The Cactus Moth (*Cactoblastis cactorum*) is a significant threat to prickly pear cactus in Arizona. This pest 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.



Cactus pad dissected to show larvae of cactus moth, *Cactoblastis cactorum* feeding within.  
Photograph by: D. Habeck and F. Bennett, University of Florida



Prickly pear pad hollowed out by larvae of the cactus moth - Photo: Les Tanner, Northwest Weeds, [www.forestryimages.org](http://www.forestryimages.org)

- **Fruit Flies** (Mediterranean, Mexican, Oriental, and Caribbean)—devastating pests of citrus impacting quality and yield. Presence in Arizona would limit export potential of citrus commodities.
- **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.

### *Field Operations: Ports-of-Entry*

The ports, Arizona's first line of defense against the importation of exotic pests, are operated as staffing allows 24 hours, 7 days a week at the eastern interstate ports of entry at Sanders and San Simon, Arizona. The Yuma port of entry operates on a 16/7 schedule as staffing permits. The ports of entry on Interstate 10 at Ehrenberg and State route 95 at Parker, and Douglas, Arizona ceased operations in FY 2006 and FY2004 respectively, due to budgetary constraints. The Duncan port of entry continues 16/5 operation with funding from the California Department of Food and Agriculture. All ports are staffed 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 2006, of the total trucks inspected, 9,898 were rejected because of pest interceptions or noncompliance with quarantine rules and regulations. This is a reduction over FY06 of 19% primarily as a result of the department's inability to operate the Douglas, Ehrenberg and Parker ports of entry and reduced operating schedules by the Arizona Department of Transportation – Motor Vehicle Division in FY07. Interceptions of pests totaled 9,608; a reduction of 18% over FY06. Rejection rates were 8%, 9.4%, 11% and 11% in FY 2007, 2006, 2005, and 2004, respectively.

## *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 FY2000 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. Continuation of this State-to-State agreement in FY 2007 solidified efforts to establish a regional approach to pest exclusion.

## *Interior Inspections*

Inspection staff assigned to five 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 22,096, an increase of 34% over FY 2006, within the state's interior through various inspections; 4,053 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 10,170 traps were placed, serviced and monitored throughout FY 2007 for 19 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 2870 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 2007, 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. Production acreage continues to grow annually, with more than 2000 acres of new production expected in Southeastern Arizona in the coming 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. Trapping key groves and inspecting cleaning facilities are two key components in the strategy.

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*



Since citrus is a major agricultural crop in Arizona; the Arizona Department of Agriculture is presently conducting a commodity based survey to protect this key industry from a wide range of harmful pests. To accomplish this goal, the department has hired and trained specialized surveyors to 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 States 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 Arizona Department of Agriculture 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,

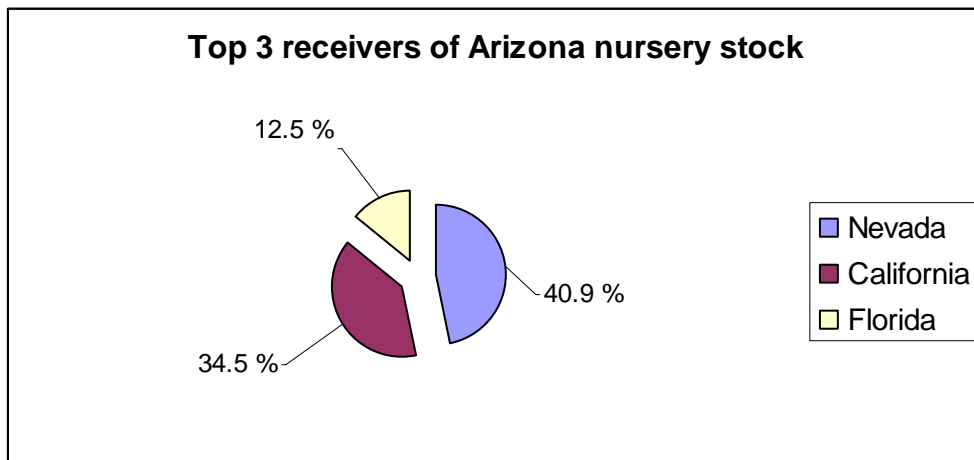
reduced inspection staff as well as numerous other pest challenges, the Pest Exclusion and Management Program demonstrated its commitment to service by the following:

## Export Certification

- **Domestic shipments**

The Arizona Department of Agriculture administers certification programs to facilitate the export of pest-free commodities.

Division inspectors issued 455 phytosanitary certificates for nursery stock shipments destined to other states:



Nursery certification - **91** Arizona nurseries requested certification to comply with the entry requirements of other states.

|   |       |
|---|-------|
| General nursery stock inspection certification..... | 44%   |
| Ozonium root rot certification .....                | 26.6% |
| Brown garden snail certification.....               | 27.3% |
| Rose Mosaic Virus certification .....               | 1.6%  |

## 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 314 applications for phytosanitary field inspection of seed crops.

#### Seed Crops Inspected

|                 |     |
|-----------------|-----|
| Cotton.....     | 25% |
| Vegetable ..... | 37% |
| Melons .....    | 31% |

|               |    |
|---------------|----|
| Alfalfa ..... | 3% |
| Grass .....   | 3% |
| Wheat .....   | 1% |

- The division issued 4,054 federal phytosanitary certificates in FY 07 to enable export of agricultural commodities to foreign markets.

**Top 5 commodities exported from Arizona**

|                      |     |
|----------------------|-----|
| Vegetable seed ..... | 33% |
| Vegetables.....      | 18% |
| Lettuce .....        | 13% |
| Citrus fruit .....   | 10% |
| Nuts.....            | 6%  |

**Top 5 countries receiving commodities exported from Arizona**

|                 |     |
|-----------------|-----|
| Mexico .....    | 42% |
| Japan.....      | 26% |
| Taiwan.....     | 4%  |
| Bahamas .....   | 4%  |
| Australia ..... | 3%  |
| Other.....      | 21% |

*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     | Buffelgrass        |
| Russian knapweed   | Yellow starthistle |
| Leafy spurge       | Sweet resinbush    |
| Camelthorn         | Diffuse knapweed   |
| Dalmatian toadflax | Hydrilla           |

*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 is not quarantined, the department shall provide the grower with technical information on effective weed control activities 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 2007, 19 Weed Management Areas (WMA's) and weed resource groups were actively pursuing control or eradication goals, mapping local weed distributions and conducting public information programs in Arizona.



**ADA Noxious Weed Program Coordinator, Jeffrey Myers (left) presents Brian Moorhead of SRP an award at a Central Arizona WMA meeting**

### *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.**



## *Preparing for New Invaders*

The identification, control and eradication of invasive weeds were an important part of the discussions that formed the recommendations made in the Arizona Invasive Species Advisory Council's 2006 report to the Governor. The Arizona Invasive Species Advisory Council was recently reconvened by Governor Napolitano as a permanent body under the joint leadership of the Arizona Game and Fish Department and Arizona Department of Agriculture. The vision for the Council is to build upon a consensus-based vision for coordinated, multi-stakeholder approaches to invasive species management in Arizona. A key part of that effort will be for the Council to develop and write a Statewide Invasive Species Management Plan for Arizona during the upcoming year.

