

*Mission :*

*To Regulate and Support Arizona Agriculture in a manner that encourages farming, ranching and agribusiness, while protecting consumers and natural resources.*



**ARIZONA  
DEPARTMENT OF AGRICULTURE  
ANNUAL REPORT**

**FY2011 – 2012**

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# Animal Health and Welfare Program

## *Priorities and Oversight*

The first priority of the Animal Health and Welfare Program (AHWP) is the prevention of certain diseases of livestock, poultry and commercial fish; and if established, their subsequent eradication quickly. Additionally the AHWP protects the public from diseases transmissible from livestock to people. Field staff in the AHWP also enforce animal neglect statutes. The staff of the Meat and Poultry Inspection Program is responsible for the oversight of livestock and poultry slaughtering as well as processing.

## *Animal Health Programs*

Ongoing state / federal / industry programs for the control and elimination of:

- Brucellosis
- Tuberculosis
- Pseudorabies
- Equine Infectious Anemia
- Scrapie
- Chronic Wasting Disease
- West Nile Virus

# USDA Cooperative Agreements

## Foreign Animal Diseases (FAD):

### *Exotic Newcastle Disease (END) and Notifiable Avian Influenza (NAI)*

The NAI and FAD Cooperative agreements continue with assistance from the USDA as well as state and industry stakeholders. As part of the surveillance program for NAI, the Arizona Veterinary Diagnostic Laboratory continues to conduct diagnostic screening on poultry samples submitted by staff veterinarians and Animal Health and Welfare staff as well as on samples from feral waterfowl and wild birds submitted by the USDA Wildlife Services. Poultry samples are collected during field investigation of Livestock and Poultry Hotline calls reporting unknown disease in poultry and are routinely screened for NAI and in some cases are designated Foreign Animal Disease Investigations (FADIs) and are tested for both NAI and END. Other surveillance activities conducted during this reporting period included seasonal monitoring of sentinel flocks for NAI. These flocks were scattered throughout the southeastern, southern, and central regions of the state and were used primarily for monitoring for West Nile Virus activity by the Arizona Department of Health Services/Arizona Veterinary Diagnostic Laboratory. Four (4) sentinel flocks in the Yuma area near the international border and one on the Ft. Mohave Reservation have been monitored year-around. All 4 of these flocks are near resting areas for migratory waterfowl, some of which may be carriers of NAI. All surveillance to date for NAI and END has been negative. During FY 2012, 1,180 outreach folders previously developed by the ADA and containing information on NAI and END as well as information on bio-security for poultry flocks were disseminated statewide to non-commercial poultry owners. A second outreach and surveillance cycle is underway for FY 2013. During this reporting period the ADA-ASD maintained and continually updated a database of non-commercial poultry owners and feed-stores. This was updated continuously by adding names and addresses of persons inquiring about or reporting poultry disease issues via the ADA-Animal Services Division (ADA-ASD) Livestock and Poultry Hotline.

## *Foreign Animal Disease Surveillance Program (7/1/11 through 6/30/12)*

Early recognition of Foreign Animal Disease (FAD) is essential to reducing the impact of a devastating disease outbreak. A summary of Foreign Animal Disease Investigations (FADIs) conducted by Federal and ADA staff veterinarians follows:

Non-Avian (equine, bovine)	15
Avian	8
Total investigations	23

Most FADIs were conducted within 24 working hours of notification.

One Foreign Animal Disease (equine piroplasmiasis in a horse) was identified during this reporting period.

Seven (7) Arizona Livestock Incident Reporting Team (ALIRT) investigations involving livestock were conducted during this reporting period in conjunction with the Arizona Veterinary Diagnostic Laboratory (AZVDL). No Foreign Animal Diseases (FADs) were identified during the investigations.

ADA Livestock Officers were dispatched to a total of 8327 calls during this reporting period. Although these calls were not directly FADI-related, they are part of the surveillance mechanism that operates within the ADA as non-VMO personnel are trained in the recognition of animal disease and are aware that any suspicious cases need to be referred as soon as possible to ADA-ASD VMOs for follow-up.

As part of the livestock emergency planning efforts the Animal Services Division continued efforts to formally identify a warehouse facility suitable for receiving, distributing, and recovering supplies from the National Veterinary Stockpile in the event of a livestock emergency.

## *Homeland Security Grant (7/1/11 through 6/30/12)*

Also as part of the livestock emergency planning effort the Animal Services Division (ASD) completed its ADA Interoperability Enhancement Grant (555607-01) that was awarded the Arizona Department of Homeland Security to upgrade and enhance the Division's emergency radio system. During this reporting period, the AZDPS Radio Shop and ADA-ASD personnel coordinated initial equipment acquisition by for this grant. Two repeaters were added and an existing one was moved to establish coverage in areas of Arizona formerly without two-way radio coverage for ADA-ASD field personnel. In addition, vehicle repeaters were installed in the trucks of field personnel to permit contact with Phoenix ADA dispatch or local law enforcement by field personnel on foot using hand-held transceivers. Programming of the vehicle repeaters will be completed by the AZDPS Radio Shop during fall 2012. Additional mobile radios were purchased and installed in field service vehicles currently without radio equipment. All equipment is narrowband compatible and completely interoperable with other compatible systems. These upgrades greatly enhance the safety of ASD field personnel during their routine activities and provide for improved communications during emergency operations. The AZDPS radio shop and their subcontractors conducted the system enhancement work. As an additional, non-AZDOHS grant-related effort, ASD personnel investigated upgrading ASD Dispatch to 24/7 capability in cooperation with other state agencies as a future. The ADA Interoperability Enhancement Grant (555607-01) was completed with the exception of programming of vehicle repeaters which should be complete in the near future.

## *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 administers the

brand 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.

### *Animal Disease Traceability System*

The voluntary Animal Disease Traceability System 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, swine and sheep, goat, equine 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 from USDA APHIS VS for this voluntary program. As the program evolves, use of Animal Disease Traceability System compatible animal identification tags will be phased in.

### *Annual Licenses*

#### **Aquaculture**

The aquaculture program regulates commercial operations that grow, transport and process fish and shrimp. Numbers of licenses issued: transporters (19), processors of fish and shrimp for human consumption (6), growing facilities (16), research and educational facilities (5), and operations that charge a fee for fishing (6).

#### **Feedlots**

Twenty-three 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 Agricultural Incident Reporting 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.

### *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.

### *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 role 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.

## 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 are 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.

State meat inspection personnel monitor general plant and equipment sanitation, processing sanitation, good manufacturing practices during production, ante mortem and post mortem inspection at slaughter, humane handling, HACCP implementation, multi-ingredient formulation, the use of approved labeling, net weights, and perform laboratory sampling programs as requested. Verify compliance with State and Federal regulations prior to allowing the inspected and passed triangle shaped "mark of inspection" to be applied to applicable product.

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.

Each day a plant operates, an MPI program employee makes a least one unannounced visit to review production activity. If discrepancies are found, they are documented and then discussed with plant management to determine what corrective actions will be taken to ensure that no unwholesome or mislabeled product leaves the plant. In slaughter plants, an MPI Inspector observes each animal presented for slaughter, both alive and at various stages during the carcass dressing procedure looking for any pathology that may be present.

Unfit and/or unwholesome carcasses and parts are removed from the human food chain and de-characterized for inedible purposes.

Humane Handling is strictly enforced to ensure no animal is mistreated or improperly stunned at slaughter.

Sanitation is observed and verified each day a plant operates either by a pre-operational check of facility and all equipment prior to the start of operations and /or operational sanitation checks to verify sanitation is maintained during production.

HACCP verification is performed by reviewing the HACCP plan and all supporting documentation. Direct observation or review of records for critical limits at all Critical Control Points. Corrective actions are taken when a deviation occurs. Verification and reassessment is performed as required by regulation.

Labels are reviewed to show that they reflect the product within is actually as the label states and that the label meets all labeling requirements as per regulation including approval and allergen declaration.

Formulation is observed to verify the product is being made to meet product standards and is being made as approved.

Net weights are verified on certified scales weighing random lots of finished product to ensure compliance.

Product samples are taken as requested by the Program Manager in selected establishments and delivered to the State Agriculture Laboratory to be analyzed for the pathogen of concern.

In the event of non-compliance establishments are notified by written non-compliance reports and regulatory control actions are taken as needed to insure affected product does not reach the consumer.

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.

Over 650 food safety samples per year are submitted to the state agriculture laboratory to be analyzed for E-coli 0157:H7, Salmonella, Listeria Monocytogenes or violative antibiotic residue. Additionally antibiotic residue samples requested by USDA-FSIS and TB samples from suspect animals at slaughter were also taken.

Nearly 7000 onsite food safety inspections were performed at official establishments this past year.

No food borne illnesses or food safety recalls were reported in any State of Arizona official establishment this past year.

### *Dairy & Dairy Products Inspection Program*

From the farm until the products arrive at 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. Water supplies are checked to ensure that potable and non-potable water supplies are not cross connected.

### *Industry samplers reduce costs of sampling and testing milk*

Under a program called the "Universal Sampling Plan", ADA licensed hauler/Samplers pull and transport samples of all milk which is picked up by tankers for processing. These samplers are licensed by the agency after testing and receive periodic reviews of their work. The samples pulled by these licensed drivers may be tested for microbiology, freezing point of milk, fat or vitamin analysis and other public health or quality testing. These samples are in addition to samples pulled by ADA inspectors for fluid milk or other dairy products.

At both dairy farms and processing plants, ADA inspectors inspect the facility for general sanitation and upkeep. Milking procedures are reviewed and all piping and containers that come in contact with milk. Hoses that milk is pumped through are inspected for certification for food grade use. At the farm, the storage and use of veterinary drugs is checked for compliance with label instructions. 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 pipes 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.

### *Pasteurized Milk or Raw Milk*

Most milk in Arizona and elsewhere in the United States is sold pasteurized. This means the fluid milk is subjected to heat treatment for a specified period of time to kill micro organisms which may be present and could be potentially harmful. This process has been used since being developed by Louis Pasteur. Industry also uses aseptic processing, a type of flash pasteurization 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 consumers understand the potential risk.

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 sold for pet consumption. The product is blended with powdered charcoal to denature the milk and turn it gray for use by pets.

### *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. The program has operated on industry assessments since 1940.

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 expiration dates, and has one of the shorter code dating requirement at 24 days from pack. This 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 of 1970.

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. Six state employees are stationed at three packing plants and provide inspection / grading services 365 days a year, 7 days a week. Under this USDA program, resident graders continually monitor plant sanitation, processing temperatures, handling and holding cooler temperatures. Eggs packed under USDA program supervision are eligible to be marked with USDA shield grademarks or other USDA identification. This USDA grade marks are valuable because many entities require it for sale, such as some grocers, commercial foodservice, foreign countries and the U.S. military.

### *Meat and Poultry / Egg Compliance Program*

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. The agency compliance officer also investigates consumer complaints regarding meat quality, safe handling, preventing inedible product from entering the human food chain and other issues related to safe food handling.

### *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 (exposure exercise) and every sixth year (ingestion exercise), federal agencies grade the state response during drills and prepare a written evaluation. Every other year, an exposure exercise is conducted, with ingestion exercises 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 2011 exercise, the Department met all standards for emergency response. The food inspection programs are integral to departmental participation in such drills, which also includes animal health veterinarians and livestock officers and brand inspectors.

*Service to the animal industry – Consumer protection*

Working closely with county health departments, other state and federal agencies, the department’s food inspection programs provide a service by inspecting many food products at the source of their production, bottling, processing and packaging. Some of this work goes back nearly to statehood, starting with the office of the Dairy Commission in 1918.

*FY12 Calls for service from the public*

Inspections	
Ownership	3142
Butcher	1283
Highway and Road Kill	107
Animal Health	106
<b>Total</b>	<b>4368</b>
Welfare	
Equine	1263
Cattle	227
Goats	50
Sheep	27
Swine	17
Other	15
<b>Total</b>	<b>1599</b>
Out of Place	
Loose and Stray	1303
Theft	57
<b>Total</b>	<b>1360</b>
Administrative	554
Native Plants	31
Dogs Chasing/Killing Livestock	27

# Citrus, Fruit & Vegetable (CFV) Standardization and Federal State Inspection

Arizona ranks third in the nation for overall production of fresh market vegetables. Arizona acreage produced over 98 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 87% of the state's total produce production, based on carton count for fiscal year 2011 are as follows:

Iceberg lettuce	26,025,177	Leaf lettuce	5,079,708
Romaine lettuce	17,111,269	Broccoli	4,239,255
Spring Mix	9,638,913	Tomatoes	3,455,319
Cantaloupe	8,531,244	Cauliflower	2,956,785
Spinach	5,432,702	Cabbage	2,588,336

As detailed below, the Citrus, Fruit and Vegetable Standardization Program and the Federal State Inspection Program conducted 19,047 inspections last year. In addition, the Citrus, Fruit and Vegetable Standardization Program issued 529 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 (CFV) that assists the Arizona produce industry, including growers, shippers, contract packers, dealers and commission merchants in complying with product quality standards.

## *Federal-State Inspection Program*

This year the Citrus, Fruit and Vegetable Standardization Program successfully completed its fourteenth 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 4.1 million packages of field tomatoes, 1.2 million packages of greenhouse tomatoes and 16.7 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.

### *Arizona Leafy Green Products Shipper Marketing Agreement (AZ LGMA)*

In September 2007 Arizona farmers came together to raise the bar for food safety. The produce industry solicited for the first Marketing Agreement in the history of the Arizona Department of Agriculture. As a result the Arizona Leafy Green Products Shipper Marketing Agreement (AZ LGMA) was formed. This agreement was renewed for an additional four years in October 2011.

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

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

Assessments on signatories to the Arizona Leafy Green Products Shipper Marketing Agreement are based on cartons or carton equivalents of affected commodities sold. Shipper means a

person that engages in shipping, transporting, selling or marketing leafy green products under his or her own registered trademark or label or a person who first markets the leafy green products for the producer. It does not mean a retailer.

Currently the AZ LGMA has 38 signatory shippers that represent 96% of the volume leafy greens grown in Arizona. AZ LGMA membership requires verification of compliance with the accepted food safety practices through mandatory government audits. University and industry scientists, food safety experts and farmers, shippers and processors developed these food safety practices. These companies have committed themselves to sell products grown in compliance with the Arizona Metrics, food safety practices accepted by the AZ LGMA Marketing Committee.

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

An Executive Order was issued to extend 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 22.6 million pounds of produce collected and distributed to food banks and other organizations serving those in need during this past year.

# Agricultural Consultation & Training (ACT)

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

- Pesticide Safety
- Air Quality
- Agricultural Conservation Education

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

- On-Farm Energy Audit Implementation Program
- Good Agricultural Practices/Good Handling Practices Food Safety Program
- 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

## Pesticide Safety Compliance Assistance

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

### *Pesticide Safety Training*

Among the more popular services provided by ACT staff are free pesticide safety training courses for pesticide handlers who work directly with pesticides while mixing, loading, and applying agrichemicals, and agricultural workers who perform tasks such as pruning, harvesting and irrigating crops.

Pesticide safety training course attendees learn how to work safely around pesticides or in areas where pesticides have been applied and the steps to recognize, respond to, and prevent pesticide exposure. Agricultural employees who possess this knowledge can reduce their risk of pesticide-related illnesses and injuries at the worksite.

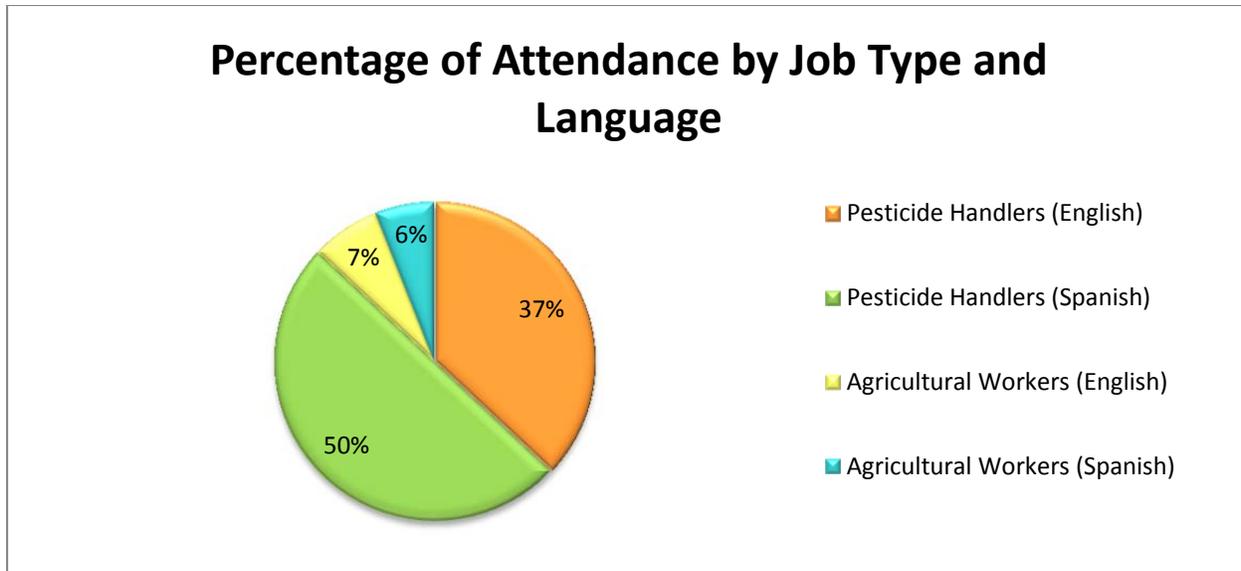
The training courses are provided in English and Spanish and are open to anyone who would like to attend. The courses are also promoted to safety trainers who want to observe a training to gather ideas for their own sessions and growers who would like to learn more about state and federal laws pertaining to pesticide safety. Licensed and certified pesticide applicators may also attend to receive two hours of continuing education toward the renewal of their license.

During FY 2012, ACT staff saw a significant increase in the number of training requests. Between July 1, 2011 and June 30, 2012 ACT staff presented pesticide safety training to 635 people who were employed by 95 agricultural operations, landscaping companies, tribal communities and governmental agencies. When compared to the previous year, these numbers represent a 35% increase in people trained and a 96% increase in operations served throughout Arizona.

As is displayed in the following chart, 87% of the people who attended the training were pesticide handlers and the remaining 13% were agricultural workers.

A two-hour "pesticide handler" course was provided to 556 people who planned to mix, load, and apply pesticides. The course was presented in English to 238 people and in Spanish to 318. Of the handlers, five licensed applicators participated to receive both their pesticide handler card and 2 Continuing Education hours toward the renewal of their licenses.

In addition to the pesticide handlers, 79 people attended a one-hour pesticide safety course designed for agricultural workers. Agricultural workers perform tasks such as weeding, irrigating, and harvesting crops in areas where pesticides had been applied in the previous 30 days. Forty-two of the 79 agricultural workers who attended this training received the information in English and 37 received the information in Spanish. The following chart shows the percentage of attendance in each type of training.



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

The Arizona Department of Agriculture's (ADA) Agricultural Consultation and Training Program worked with industrial hygienists from ADA's Environmental Services Division to present the pesticide safety train-the-trainer workshops.

The workshops were presented in English and Spanish and were designed to increase knowledge on



human health and environmental concerns when working with pesticides and steps to reduce exposure to agrichemicals. Important pesticide safety information such as pesticide label comprehension, personal protective equipment, environmental protection, restricted entry into treated areas and pesticide emergency response were included.

Hands-on training techniques and group activities were used during the courses to demonstrate ways to extend pesticide safety information to pesticide handlers and fieldworkers.

## *Pesticide Safety Teaching Tools, Informational Resources, and Training Modules*

ACT staff develops new 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 2012, ACT staff partnered with Extension Specialists from the University of Arizona Cooperative Extension Service to provide agricultural pesticide applicator pre-certification courses in Poston and Chinle.

Session topics included pest management, application equipment calibration, pesticide product label comprehension, environmental protection, emergency preparedness, and health impacts of pesticide exposure. The courses prepared attendees to take the National Pesticide Applicator's Core Exam, which was administered at the end of the day.

ACT Pesticide Safety Program staff also worked with the Arizona Landscape Contractors Association (ALCA) to present a similar program in Phoenix, Maricopa and Tucson.



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*Attendees participate in a pesticide equipment calibration activity during a pesticide applicator pre-licensing course.*

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During this reporting cycle, ACT staff provided five, 4-hour training and exam sessions on pesticide safety and equipment calibration. A total of 63 people attended the sessions, which were part of a series of educational courses designed for people applying for their Arizona Certified Landscape Professional's License.

In addition to designing and presenting the above programs, ACT staff served on national and regional pesticide safety resource review committees. During FY 2012, the American Association of Pesticide Safety Educators asked ACT pesticide program staff to review and edit an article submitted to the Journal of Pesticide Safety Education. The U.S. Environmental Protection Agency also asked ACT staff to review several soil fumigant training modules and exams that will be available through the Internet in late fall 2012.

# Air Quality Compliance Assistance

## *Regulated Agricultural Best Management Practices*

The Regulated Agricultural Best Management Practices (RABMP) program has completed its ninth 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 incurring regulatory intervention for applicable federal, state and local regulation.

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

The air quality program staff regularly participates in local air quality stakeholder's meetings such as:

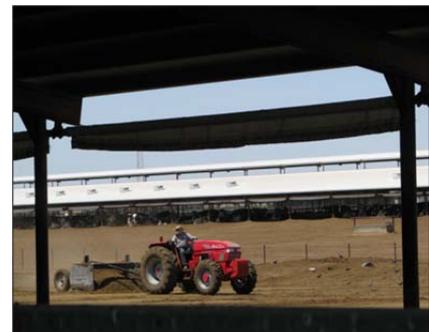
- EPA Region IX Best Achievable Control Measures (BACM)
- ADEQ's Regional Haze and Natural Events meetings
- Maricopa County rule 310 and 310.01 public process
- Maricopa County Association of Governments (MAG) Air Quality Technical Committee Meetings for the EPA 5% reduction of particulate matter (PM10) plan
- Pinal County PM10 reduction stakeholder group
- Yuma County stakeholder groups for the Ag BMP program
- Governor's Agricultural Best Management Practices Committee Technical Work Group
- CAFO Education Group
- State and County Farm Bureau

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, nurserymen, and producers in animal agriculture 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, likelihood for implementation, and adopted into state regulation.

New this past year was the creation and final rule submission of BMPs due to the passage of Senate Bill 1225 in 2009. This legislation mandates that all beef cattle, dairy, poultry, and swine facilities within a PM10 nonattainment area comply with an Ag BMP Program for particulate matter. The new BMPs have been developed by the Governor's Ag BMP Committee and became effective January 1, 2012. This legislation also allows for any new PM10 nonattainment area established in the State on or after June 1, 2009 to be covered by the Ag BMP Program.

Examples of BMPs include:

- Using a track-out control system, helping to remove mud and soil from tires of farm equipment before they enter a paved public road.
- Planting and tillage based on soil moisture is timing activities to coincide with precipitation or the application of water.
- A wind barrier is constructing a fence or structure, or provides a woody vegetative barrier by planting a row of trees or shrubs, perpendicular or across the prevailing wind direction.



- Use drag equipment instead of push equipment to maintain pens.
- Use a water misting system that project a cloud of very small water particles onto the manure surface.
- Reduce vehicle speeds on unpaved farm roads not to exceed 20 mph.
- Install engine speed governors on feed trucks that limit speeds to 15 miles per hour.

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

- On-site visits to farms and nurseries to make site specific assessments and recommendations that can ensure compliance with air quality regulations. These visits include discussions of the Ag BMP program and the BMPs available for tillage and harvest, non-cropland, and cropland categories. For fiscal year 2012 there were 166 visits made to producers to promote the program.
- Agricultural BMP training for farm workers includes the various techniques that employers can use to comply with state and local regulations and the different ways field workers can get involved in reducing agricultural air pollution. A video is provided during training, in English and Spanish, which explains how dust affects our health, where agricultural dust can come from and what to do if excessive dust is reported to a regulatory agency. In fiscal year 2012 there were 30 trainings, presentations, and promotions of the program to agricultural workers and representatives. Outreach and training reached 3,283 participants.
- This year we changed from fax notifications to e-mail notifications of high wind advisories to the regulated agricultural communities of Maricopa, Yuma, and Pinal Counties. This notification system alerts the producer to possible PM10 exceedances and stagnant air conditions. During these forecasted conditions, producers are encouraged to implement their dust control action plans. During fiscal year 2012, seventeen forecasts were sent to 299 producers in Maricopa, Yuma, and Pinal Counties.
- Providing “Air Quality & Agriculture – Air Quality in Action”, a quarterly air quality newsletter to the agricultural community. This newsletter features articles on air quality issues impacting all areas of agriculture in all parts of the state, a “Featured BMP” column, and contact information to obtain agricultural air quality information or to schedule an on-site visit. In fiscal year 2012, 1,165 copies of the newsletter were sent to 299 stakeholders in Maricopa, Yuma, and Pinal Counties. Copies of the newsletter were sent with the State Land Department’s newsletter to 300 producers in both the fall and spring.
- Publication of various articles and ads in industry periodicals, providing information on updates in air quality regulations, agricultural dust during high wind events and changes in the RABMP program. In fiscal year 2012, fourteen articles and ads were published with a readership of 261,440 people. 240,000 people reached were from an article published in the Arizona Daily Star about last year’s monsoon dust storms and the efforts made by agriculture to reduce its dust.
- The air quality program worked with other agencies such as Arizona Department of Environmental Quality (ADEQ) and county farm bureaus to address compliance issues needing correction. These include public complaints, track-out issues, and violations. During fiscal year 2012, eight issues were corrected.



During the fiscal year 2012 the Governor’s Ag Best Management Practices Committee and the Technical Workgroup was reconvened to address the partial disapproval by the EPA of the Ag BMP Program. The EPA felt that the BMPs lacked “specificity” and “enforceability” due to the lack of a mandatory reporting system. The workgroup was tasked to redefine the BMPs and create a reporting system to capture the needed information that will meet EPA’s request.

In 2005 the Yuma Ag BMP program was implemented to address the PM10 problem in Yuma County, but no outreach materials were available. Outreach to the community began in fiscal year 2010 to promote agriculture’s

proactive approach to addressing the PM10 problem in Yuma County. In fiscal year 2012 outreach continued with meeting producers, attending industry functions and reestablishing stakeholder meetings. Agriculture industry members met with ADEQ and EPA through the local Natural Resources Conservation District to discuss the “next” steps in reaching attainment status.

## Agricultural Conservation Education Program

In September 2002, the Arizona Department of Agriculture’s (ADA) Agricultural Consultation and Training Program (ACT) began assisting the agricultural community through a partnership with the United States Department of Agriculture’s, Natural Resource Conservation Service (NRCS). Since its inception this partnership has evolved into the Agricultural Conservation Education Program (ACEP). The ACEP coordinator assists agricultural producers to protect the environment through compliance assistance



outreach and education, to conserve the State’s natural resources through Conservation Technical Assistance (CTA), and assists them with designing and implementing conservation practices with cost share assistance from Farm Bill Programs through NRCS.

The conservation of natural resources is achieved through CTA. CTA provides the technical capability, including direct conservation planning, design, and implementation assistance, that helps farmers plan and apply conservation practices on the land. This assistance is provided to agricultural producers as well as individuals, groups, and communities who make natural resource

management decisions on private, tribal, and other non-federal lands.

The NRCS assists the Natural Resource Conservation Districts (NRCD) with meeting their conservation goals. The ACEP coordinator is primarily assigned to the NRCS Avondale Field Office which supports the majority of Maricopa County and four NRCD offices, Agua Fria/New River, Buckeye Valley, Gila Bend, and Wickenburg. The resource concerns addressed with the 2012 EQIP applications include Air Quality including particulates and greenhouse gases, Soil Condition and/or Erosion and Water Quality and Quantity. The ACEP coordinator works directly with the NRCS Environmental Quality Incentives Program (EQIP) which provides voluntary conservation programs for farmers and ranchers that promotes agricultural production and environmental quality. EQIP offers financial and technical help to assist participants to install and implement structural and management practices on eligible agricultural land. Currently, the ACEP coordinator is assisting NRCS with many EQIP and WHIP plans including 21 contracts for 2009, 29 for 2010, 4 for 2011 and 11 for 2012. The total acres under active conservation contracts for 2010 are 10,383, 2011 are 551 and 2012 acres under contract are 1,561. The ACEP Coordinator continues to assist the NRCS Avondale Field Office with project and status reviews, soil loss evaluations and administrative management of EQIP contracts for federal fiscal year 2008, 2009, 2010 and 2011 totaling 356,345 acres.



The ACEP coordinator also directly assists CAFO owner/operators with meeting state and federal water quality regulations. Utilizing resources through NRCS, the ACEP Coordinator can further help CAFO producers by developing Comprehensive Nutrient Management Plans, completing soil tests for compaction and permeability, and assisting with the planning for structural practices for waste water utilization.

## *Educational Outreach through the Multi-Agency CAFO Education Group*

ACEP coordinator also meets compliance assistance goals through outreach opportunities which include the CAFO Education Group. The CAFO Education Group is a 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 Feeder's Association, United Dairymen of Arizona (UDA), Arizona and Maricopa County Farm Bureaus, NRCS, Environmental Protection Agency (EPA) Region 9, several Natural Resource Conservation Districts, The University of Arizona Cooperative Extension, ADEQ and ADA. ACEP chairs the CAFO Education Group and facilitates meetings.



Further educational outreach provided by ACEP includes maintaining and updating The CAFO Ready Reference Guide. This concise guide is a collection of the various county, state, and federal agencies that regulate and/or offer compliance programs for Arizona's CAFOs. Other outreach is conducted by answering producer and consumer questions and providing information through letters, emails, faxes and phone calls. Total number of people reached through outreach and education materials for fiscal year 2012 was 1859.

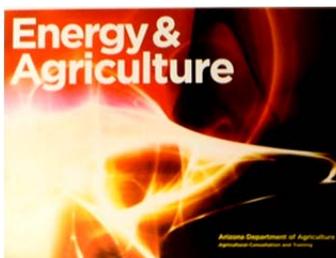
## On-Farm Energy Audit Implementation Program

In August of 2011, the Arizona Department of Agriculture's (ADA) Agricultural Consultation and Training (ACT) had partnered with the USDA's Natural Resources Conservation Service (NRCS) and the Governor's Office of Energy Policy to provide On-Farm Energy Audits at no cost to producers. Energy has been a new concern with the cost of energy increasing. The first step in reducing your energy costs is to have an audit completed and see where to reduce energy use. Producers can reduce their input costs, maintain production, protect natural resources, reduce dependence on fossil fuels, and save money by conserving their energy use. These audits may be completed on farms, nurseries, concentrated animal feeding operations and ranches to evaluate energy consumption.

Currently, the program consists of two phases. Phase One will focus on Headquarters Energy Audits. These audits consist of analyzing farm buildings, which includes lighting, insulation, ventilation, water systems, and heating that are used on dairies, feedlots, and greenhouses. Phase Two will focus on Landscape Energy Audits. These audits will analyze the agronomic operations like crop and pasture management, forestry practices, manure handling, irrigation, and other farming activities.

The On-Farm Energy Audit Implementation Program provides outreach by conducting on farm visits and educational workshops, trainings and presentations during industry functions. Both the on farm visits and group presentations include distributing program information, explanation of the audit process and providing information of possible cost share programs from agency partners.

Outreach and education for fiscal year 2012 included:



- On-Site visits include a discussion of the program and its benefits, the steps involved in the auditing process, and what is expected from the producer. There were 91 visits to local producers to promote the program and its benefits.
- The program was promoted during various agricultural industry functions and meetings. This includes the local and State Farm Bureaus, Arizona Nursery Association, United Dairymen of Arizona, and local Natural

Resources Conservation Districts. In fiscal year 2012 there were 26 promotional opportunities that reached 2,403 participants.

- Publication of various articles and ads in industry periodicals providing information on the program, its benefits, and how to apply. In fiscal year 2012, ten articles and ads were published with a readership of 17,772 people.
- An *Energy and Agriculture* publication was created, designed and distributed. The publication discussed the program and how to apply, information from the other partners involved, possible cost share programs that may be available, and endorsements from the agriculture industry. Approximately 4,000 publications were mailed or distributed to producers statewide.

The second aspect of the On-Farm Energy Audit Implementation Program is working with a third party vendor to complete the energy audit. EnSave is the auditing company that is conducting the audits. They are NRCS certified Technical Service Providers (TSP) that follow the American Society of Agricultural and Biological Engineers (ASABE) Standards. ACT Staff acts as the data collectors for the auditing company and collects the needed information to complete the audit. This data includes information on motors, pumps, generators, compressors, lighting, ventilation, and irrigation systems on the property. This data helps in the process of analyzing their energy use and developing the recommendations in the audit.

- ACT Staff completed training and has been certified as data collectors for both Headquarters and Landscape Energy Audits. The purpose of the training was to train ACT Staff to perform the onsite data collection for an energy audit that will in turn provide support for NRCS Agricultural Energy Management Plans, Rural Development REAP grant and loan applications, and other energy efficiency programs for producers.
- In fiscal year 2012 ACT Staff received 49 applications for On-Farm Energy Audits. All applications must be submitted to the Arizona Department of Agriculture to be eligible for the program. The applications are reviewed and evaluated to determine whether the applicants will receive a Headquarter or Landscape Audit.
- Nineteen applications were submitted to Ensave to receive audits. These include seventeen Phase One Headquarter Audits that are conducted on concentrated animal feeding operations and greenhouses. Two applications for Phase Two Landscape Audits were also submitted.
- From the 19 applications submitted, nine audits have been completed. All nine were Headquarter Audits conducted on dairies and one greenhouse in Maricopa, Pinal and Pima Counties. The final report includes information on current energy use, recommendations to increase the facilities energy efficiency, and possible cost share programs available to help make the recommendation.



## Good Handling Practices/Good Agriculture Practices (GHP/GAP)



The Agricultural Consultation and Training (ACT) Program of the Arizona Department of Agriculture (ADA) through a Specialty Crop Block Grant Program, has entered into a cooperative agreement with the University of Arizona Cooperative Extension Service to develop and make available a course for workshop training. This is the first year of this program which has been developed for growers and producers, processors, harvesters, warehouses, transportation lines, and gardeners of fresh fruit, vegetables,

and tree nuts, desiring to request and pass a food safety audit and sell their produce. Good Handling Practices (GHP) refers to those operations post harvest while Good Agriculture Practices (GAP) refers to on-farm operations and systems.

This training would be used to develop a food safety plan or a food safety program leading to passing an audit for GHP/GAP certification. Attendees of this training will not be certified at the end of this class, but will have the tools required to develop a food safety program and request an audit for certification. GHP/GAP, a program of the United States Department of Agriculture (USDA), requires growers, processors, and those transporting these products, to increase their awareness of food safety hazards and to mitigate these hazards, and to monitor and document their actions.

Certification by the USDA, ADA or a third party is required for growers to sell their produce at the wholesale level. Without any certification growers/producers are still able to market at roadside stands and farmers markets to the ultimate consumer. Selling wholesale to restaurants and others who then sell to the consumer is prohibited by the FDA food code without any certification of approved source. ADA's Citrus, Fruits and Vegetables (CF&V) Inspection Program, Arizona Department of Health Services and the County Health Departments are the regulatory enforcement entities for Arizona retail and wholesale facilities.

Dr. Kurt Nolte, University of Arizona Extension Agent in Yuma, shown right, has developed this two half-day training that is traveling around the state. Dr. Nolte's field is lettuce production and after food borne illness outbreaks from fresh vegetables, understood a need to increase food safety awareness to the area growers. These workshops have been presented to nearly 200 individuals in different areas of the state including Yuma, Tucson, Phoenix, Flagstaff, Casa Grande, Willcox, Nogales, Bullhead City and Prescott. Attending growers have been diversified as to their experiences, farm sizes and crops. Lettuce, apples, pistachios, tomatoes, chili, dried beans, field and greenhouse vegetable production and other growers have attended these workshops. Warehousing, storage and transportation operations have also attended.



There are several different auditing programs, mostly industry driven. USDA's GHP/GAP program is the most basic, entry level food safety program, while Global and Harmonized GAPs are more restrictive and detailed. The Leafy Greens Marketing Agreement (LGMA) between California and Arizona may be the most restrictive and complex.

The GHP/GAP training, as developed and presented by Dr. Nolte, is delivered by components and designed to reach the appropriate audience. Each component may be for an individual audit or may be combined with other components.

- All audits begin with a **General Questions Section**, (below left), regarding the food safety program, worker health and hygiene, and traceability.
- Component 1 is the **Farm Review** and delves into sewage, irrigation water, animals and wildlife, manure usage, soils and traceability.
- Component 2 is **Field Harvest and Field Packing Activities**. This section questions field sanitation and hygiene, field harvesting and transportation, and traceability.
- Component 3 is **House Packing Facility** and reviews the packing house facility conditions, wash packing lines water use and sources, packing house worker health and hygiene, general housekeeping, pest control, and traceability.

General Questions					
Implementation of a Food Safety Program					
Questions	Points	Yes	NO	N/A	Doc
A-1 A documented food safety program that incorporates GAP and/or GHP has been implemented.					D
A-2 The operation has designated someone to implement and oversee an established food safety program. Name _____					D
Traceability					
Questions	Points	Yes	NO	N/A	Doc
G-1 A documented traceability program has been established.	15				D
G-2 The operation has performed a "mock recall" that was proven to be effective.	10				R
Worker Health & Hygiene					
Questions	Points	Yes	NO	N/A	Doc
G-3 Potable water is available to all workers.	10				R
G-4 All employees and all visitors to the location are required to follow proper sanitation and hygiene practices.	10				P
G-5 Training on proper sanitation and hygiene practices is provided to all staff.	15				D
G-6 Employees and visitors are following good hygiene/sanitation practices.	15				
G-7 Employees who handle or package produce are washing their hands before beginning or returning to work.	15				
G-8 Readily understandable signs are posted to instruct employees to wash their hands before beginning or returning to work.	10				
G-9 All toilet/restroom/field sanitation facilities are clean. They are properly supplied with single use towels, toilet paper, hand soap or antibacterial soap, and potable water for hand washing.	15				
G-10 All toilet/restroom/field sanitation facilities are serviced and cleaned on a scheduled basis.	10				R

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- Component 4 is for **Storage and Transportation** and pertains to large warehouses who receive, store and ship fresh produce. These topics include product, containers, pallets, pest control, ice and refrigeration, transportation, worker health and personal hygiene, and traceability.

- Component 6 is **Wholesale Distribution Center/Terminal Warehouses** and reviews the receiving, storage facility/temperature control, pest control, repacking and reconditioning product, worker health and personal hygiene, shipping/transportation and traceability.

- Component 7 is **Preventive Food Defense** and takes into account the facility security for both employees and visitors, and security procedures of the facility.

- There is no component 5 which was titled **Traceability**, as the traceability factors were incorporated into each of the individual components.

A grower may want to audit for Component 1 only if the harvesting and packing, transportation and storage are contracted out. Or the farm may perform its own harvesting and packing and will audit for Component 1 and 2. The warehouses may only want certification in Component 4 and/or 6. Component 3 is used for those facilities that wash and pack the produce in a dedicated building. It is possible that a business will encompass all of the components and will audit for each section or audit for a combination or for only one.

There is no cost to attend the workshop and training materials are given free to attending participants. ADA will offset the cost of the audit with a cost share/grant up to 75% of the cost of the audit.

There is follow up contact to growers and those attending the workshops in offering assistance in developing a food safety program leading to the audit and certification. One-on-one consultation, at the farm or operations location, is available and encouraged to those with plans to develop a food safety program and request an audit. Several of these producers with one-on-one consultations have successfully passed audits.

During the one-on-one consultation, which may take 2 to 5 hours, the ACT representative, the Food Safety Programs Coordinator, will go through each question of each section of the components the farm, grower, or facility will audit for. Each answer is documented and at the end of the session, a report (below) will be generated and sent to the facility, and also to ACT, CF&V, Dr. Nolte, and the ADA auditor. A follow up one-on-one may be required after correcting deficiencies, prior to the actual audit, with another report being generated and distributed. This is done to alert those involved of the corrections, accomplishments and levels of readiness for each component.

**OPERATION/FARM:** \_\_\_\_\_  
**DATE:** \_\_\_\_\_  
**CONTACT:** \_\_\_\_\_  
**CONTACT:** \_\_\_\_\_  
**ACT REPRESENTATIVE:** \_\_\_\_\_

**They want certification in Sections 1, 2, 3, 4, 6, 7.**  
This is a hydroponic operation, totally enclosed within a warehouse.

Produce will include tomatoes, peppers, cucumbers, mushrooms, microgreens.

**GENERAL QUESTIONS**  
**IMPLEMENTATION OF A FOOD SAFETY PROGRAM**  
P-1: in the beginning stages,  
P-2: \_\_\_\_\_

**TRACEABILITY**  
G-1: Yes, a program is beginning to be developed, not written  
G-2: not yet

**WORKER HEALTH AND HYGIENE**  
G-3: yes, City of \_\_\_\_\_ contract supplied

Once the grower or facility is confident they can pass the audit, they are able to contact the ADA Auditor, or a third party non-governmental organization such as Siliker or Primus, to visit their location and administer the audit. Each question of each section is weighted for points, and a score of 80% is required for certification. Questions that do not pertain to the operation are removed and the score is adjusted to reflect that. A score below 80% will not pass the audit and the ADA Auditor will generate an Action Plan to inform the operator what would be required to pass. Once the discrepancies are corrected a second audit will be scheduled. A score above 80% is passing and the operator will be sent a certificate from USDA's Agricultural Marketing Service to reflect that fact and be entered into the AMS's data base on-line for prospective customers and suppliers.

ACT offers a **Cost Share Program** with funds from a Specialty Crop Block grant from USDA's Agricultural Marketing Service. A successful operator will submit an application, proof of payment of an audit and the GHP/GAP certificate from USDA to the ACT office to help offset the cost of the audit. Reimbursements will cover 75% of all costs associated with one successful USDA GHP/GAP audit, up to a maximum of \$750. To date, several operators have taken advantage of this program. GHP/GAP certifications expire and must be renewed annually.



## 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 was 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. The grant program has been run on a biennial grant cycle.



During the two-year cycle, the LCCGP grant manual, grant guidelines, and rating criteria are subject to a public comment period. The fifth grant cycle will be completed in fiscal year 2013. This final grant cycle utilizes unspent grant funds from all previous grant cycles.

During fiscal year 2012, the LCCGP Coordinators worked to monitor completed projects from the previous grant cycles. The following types of projects were completed by grantees:

- 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 a percentage of the total project funding, LCCGP funds could be awarded for use as the required cost share funds to the EQIP 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.



The LCCGP Coordinator continues to promote the program, as well as administer the existing grant contracts from the fiscal year 2005, 2007, 2009 and 2011 grant cycles. Throughout the duration of the grant project, the LCCGP Coordinator provides administrative support and information, answers questions and concerns and assists the grantee with reimbursement and funding advance requests. At the close of FY12, 56 of the 56 grantees from the fiscal year 2005 cycle, 61 of the 70 grantees from the fiscal year 2007 cycle, 49 of the 63

grantees from the fiscal year 2009 cycle and 18 of the 43 grantees from the fiscal year 2011 cycle have completed their proposed grant projects. Additionally, throughout fiscal year 2012, over \$1.9 million was disbursed to grantees to work on their contracted projects.

Throughout fiscal year 2012, ACT personnel have participated in various stakeholder meetings and conferences to promote the grant program. Meetings include the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) State Technical Advisory Committee meetings, the Arizona Association of Conservation Districts annual meeting, the Arizona Cattlemen's Association annual meeting and the Arizona Farm Bureau annual meeting.

ACT personnel also continue to monitor projects funded by grant funds. Through on-site visits to see what has been completed, they are able to ensure that the funding is being utilized properly and provide additional technical services to grantees.

## Specialty Crop Block Grant Program-Farm Bill



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." The Food, Conservation, and Energy Act of 2008 (Farm Bill) amended the Specialty Crops Competitiveness Act of 2004. Under the amended Act, the Secretary of Agriculture is directed to make grants to States for each

of the fiscal years 2008 through 2012 (referred to as the Specialty Crop Block Grant Program – Farm Bill or SCBGP-FB) to be used by State departments of agriculture to enhance the competitiveness of specialty crops. Specialty crops are defined as fruits, vegetables, tree nuts, dried fruits, and nursery crops (including floriculture). The value of U.S. specialty crops is equivalent to the combined value of the five directly subsidized program crops. However, sixty percent of all farmers do not raise program crops and do not receive direct subsidies. The purpose of this act is to help address this inequity between program crops and specialty crops.

The Arizona Department of Agriculture's Specialty Crop Block Grant Program - Farm Bill is administered by the ACT program. In fiscal year 2012, Arizona's State Plan was approved by the U.S. Department of Agriculture's Agricultural Marketing Service (AMS), and a cooperative agreement, which provided \$1,172,102.32 in grant funds to the ADA, was executed on October 3, 2011. The SCBGP-FB Program Coordinator worked with sub-grantees to execute grant award agreements, and provide guidance and assistance with quarterly reports and quarterly reimbursements.

On February 8, 2012 AMS announced the availability of \$55 million in federal fiscal year 2012 funding. Each state department of agriculture is eligible to receive a base grant of \$181,109.88. In addition, AMS allocated the remainder of the grant funds based on the proportion of the value of specialty crop production in the state. The 2012 base grant amount plus the AMS assigned value of specialty crop production for Arizona is \$1,263,013.24. The SCBGP-FB Program Coordinator submitted the Arizona State Plan to AMS on July 11, 2012.

## 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 1.1 million cartons of grapefruits, lemons, oranges and tangerines. Council programs and projects target production, plant pest and disease control, efficient fertilization and irrigation techniques and variety development. The Council is comprised of five citrus producers

appointed by the Governor:

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

### **Fiscal Year 2012 Financial Status - Arizona Citrus Research Council**

Revenue	\$13,070.60
Expenses	\$13,851.35*

\*The Citrus Council fund balance is more than adequate to cover the difference between expenses and revenues in FY 2012.

Legislation passed in the 2012 legislative session created the Arizona Citrus Trust Fund which holds the Council's revenue in trust.

## 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 26 million cartons of iceberg lettuce annually. The Council is funded by a per carton (.004 cents) assessment paid by Arizona iceberg lettuce producers. Council members are appointed by the Governor and consist of seven producers:

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

The Council reviews and awards a wide range of research proposals on topics such as variety development, lettuce pest eradication, and for programs relating to food safety, production, harvesting, handling and transporting lettuce from fields to markets. During fiscal year 2012, the Council continued to support research projects by granting over \$77,000 to the University of Arizona. Some examples of research grant projects include insect management for desert lettuce, reducing nitrogen use in lettuce through improved placement of side-dressed fertilizer and screening potential lettuce breeding lines for improved nutrient use.

### **Fiscal Year 2012 Financial Status-Arizona Iceberg Lettuce Research Council**

Revenue	\$107,479.10
Expenses	\$ 81,641.78

Legislation passed in the 2012 legislative session created the Arizona Iceberg Lettuce Trust Fund which holds the Council's revenue in trust.

## 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 spatial variation in wheat yield and protein using soil and plant sensors, reducing Cadmium accumulation in Durum wheat grown in Arizona, managing nitrogen application for desirable grain protein content in durum wheat using image processing and canopy reflectance. Annually, the council funds the small grain variety test trials used by producers to evaluate the varieties available. More than \$62,000 was spent on research projects during fiscal year 2012.

The Council supports the activities of the U.S. 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. The council collaborates with the California Wheat Commission to conduct an annual crop quality survey of the Desert Durum<sup>®</sup> crop in Arizona and Southern California and publishes the results for buyers around the world.

### **Fiscal Year 2012 Financial Status - Arizona Grain Research and Promotion Council**

Revenue	\$147,263.99
Expenses	\$145,892.31

Legislation passed in the 2012 legislative session created the Arizona Grain Research Trust Fund which holds the Council's revenue in trust.

## Agricultural Employment Relations Board



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

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

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

The Board meets once per year or as necessary.

# State Agricultural Laboratory

The Arizona Department of Agriculture 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.

The Department laboratory exists in two separate, small laboratories. The table below illustrates where testing is conducted.

Service	1520 W Adams	250 N 17 <sup>th</sup> Ave
Entomology – M	c (limited)	
Entomology – PCR	c	
Plant Pathology – M	c	
Plant Pathology - Elisa	c	c
Plant Pathology - PCR	C	
Seed – Export	c	
Seed – Regulatory	C	
Brucellosis – Milk		C
Meat – Food Safety		C
Food Safety	C (rtPCR methods)	C
Dairy Micro		C
Dairy Antibiotics		c
Dairy Pesticides	c	c
Dairy Aflatoxin	c	c
Feed	C	
Fertilizer	C	
Pesticide Formulations	C	
Pesticide Residue	c	C

**Legend:**

c = capability to perform testing under certain conditions with added/redirected resources

C = capacity to perform testing with current resources

## Pink Boll Worm Eradication

The SAL worked in conjunction with the Arizona Cotton Research and Protection Council (ACRPC) and the United States Department of Agriculture (USDA) to develop a method of identifying native pink boll worms. This insect is a significant pest affecting the production of cotton in arid climates. In an effort to eradicate the pest, the USDA releases millions of sterile pink boll worm moths into the environment in areas where cotton is grown. The sterile insects compete with any remaining native insects during mating, effectively reducing the propagation of the species. This program has been very successful and the damage caused by the pest has been largely eliminated.

To monitor the success of the eradication, thousands of insect traps are placed and monitored in cotton production areas throughout the US and Mexico. Before releasing the pink boll worm moths, the USDA must "mark" them in order to delineate the sterile moths from any naturally occurring moths. In the past, the pink boll worms were fed a chemical dye which aided in the detection of the sterile moths. However, the longer the released moths were in the environment prior to being trapped, the lower the concentration of the dye that remained in the moths for detection. As the population of the native moths approaches zero, the difficulty in detecting a very low level of dye in the sterile moths has become an impediment to determining whether the eradication effort needs to continue.

SAL scientists developed a new method of determining if a trapped insect was a released sterile moth or a native moth. Utilizing advanced instrumentation, SAL scientists could detect small amounts of the element strontium when present in the body of the insects. USDA modified its rearing procedures to incorporate strontium into the diet of the sterile pink boll worms. Now moths obtained from the traps are tested by SAL scientists; moths containing significant amounts of strontium can be readily identified as sterile moths while those lacking strontium can be assumed to be native moths. The lab has processed nearly 2,000 samples for the ACRPC this year.

## Homeland Security

The SAL continues to maintain its capabilities to provide assistance to the State and the Nation in the event of a homeland security emergency. Federal, State and local governments continue to work 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.

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 is a member of the FERN for both chemical and microbiological testing.

# 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.

The laboratory continues to monitor the increasing demand for ISO (International Organization for Standardization) certification for laboratories providing regulatory testing. The evolving standard for laboratories similar to SAL is ISO17025. As federal agencies complete the implementation of ISO certification within their own labs, it is anticipated that the federal agencies will require state laboratories to become similarly certified. Such certification is expensive and time intensive; therefore, SAL will continue to monitor the situation and remain a part of the conversations with regard to such certification requirements.

## *Laboratory Audits*

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. Last year, in accordance with procedures related to the relocation of the laboratory, SAL underwent a special on-site audit; SAL passed the audit with flying colors. Such audits, combined with analyst participation in an annual proficiency testing program ensure the quality of the analyses conducted by the dairy microbiology laboratory.

## *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; 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; seed sample PTP by the Association of Official Seed Analysts; pesticide product PTP by the American Association of Pesticide Control Officials; pesticide residue PTP by the Environmental Protection Agency and mycotoxin sample PTP by the American Oil Chemists Society.

## Animal Disease Detection

The laboratory collected 288,110 blood samples and tested 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. Since the 1940s, the USDA has sought to eradicate brucellosis from the U.S., 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. The last area in the U.S. known to have an active presence of brucellosis is in and around Yellowstone National Park. Monitoring is still conducted in Arizona due to the presence of a very large slaughter facility in Tolleson where some of the cattle processed originate from the Yellowstone area.

## Food Safety

The laboratory participates in the Department's Food Safety and Quality Assurance Program by testing agricultural commodities for food-borne pathogens in the 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.

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. Tests conducted at SAL include bacteriological analyses, enzyme activity for proper pasteurization of dairy products, antibiotic residues, and other indicators of milk safety and quality.

## Forensic Testing

The SAL scientists test samples collected during investigations of off-target application of agricultural chemicals, 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. These regulatory samples are collected by investigators and delivered to the laboratory utilizing stringent chain of custody procedures. Sample types received include water, soil, produce, foliage, animal tissues, air, clothing and surface swabs. Complicating the analytical testing process are the over 11,000 pesticide products registered for use in Arizona, any one of which could need to be detected as part of an investigation. 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.

The laboratory also 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 grade 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, phosphorous or other nutrients requiring multiple testing.

SAL analysts conduct testing of commercially available seed products for purity, germination rate, and weed seed content to benefit Arizona's farmers, landscapers, homeowners, golf courses and seed export companies. 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. SAL's seed analysts are certified by the Association of Official Seed Analysts.

# 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 Licensing Section provides licensing for much of the agency ensuring quality customer service and appropriate cash handling. The Compliance Section protects the public, agricultural workers and pesticide handlers employed in agribusiness through field inspections and complaint follow-up to monitor proper use of crop protection products and ensuring compliance with environmental laws and rules. They also inspect marketplaces and review labels, as well as take samples of feed, fertilizer, pesticide and seed for analysis at the State Agricultural Laboratory to ensure consumers are purchasing what is represented on the labels. The Office of Special Investigation is the criminal investigative section for the agency relating to department statutory authorities.

This year there was a big change within the division. The legislature passed and the Governor signed SB 1194 giving the Director oversight authority for the Office of Pest Management (OPM). (The OPM is the regulatory agency for pesticide use not in the agricultural setting.) The legislation required the Director to appoint an OPM Acting Director, which logically due to the similarity in function – pesticide regulation, the ESD Associate Director was appointed and the entire OPM office and staff moved from its Scottsdale location onto the first floor of the Agriculture building on July 13<sup>th</sup>.

## *Staff Allocations*

The Environmental Services Division had 19.5 full-time employee positions as of June 30, 2012 which was no change from 2011. Nine of these positions are in the field and are responsible for sampling various nonfood products, ensuring compliance with pesticide, feed, fertilizer, seed and worker protection statutes and rules, and conducting criminal investigations.

## *Information Technology*

The IT Section has completed the integration of IT systems, combining the existing Windows systems of the Agriculture Department with the Open source systems of the Office of Pest Management. This has resulted in a cohesive system that fully supports both entities as a single operating agency. This was completed with no down time for either Agency during the integration phase and no customer outage for citizen-client data submission to either agency.

New rollout of a custom application supporting the Native Plant program has been completed and is fully operational. New reporting capabilities and increased efficiencies to the Licensing section and to the clients have also been implemented.

The Agency web site ([www.azda.gov](http://www.azda.gov)) received 4,987,817 total hits during the past fiscal year, comprised of 158,750 unique visitors. The Brands advertisement continues to be the most downloaded file on the site followed by the Brands application.

Remote access for employees has been significantly improved during this year, with all employees able to access pertinent information from anywhere using the Internet.

One of the roles of IT that does not receive much attention, but is critical to the ongoing success of the entire agency is that of electronic security. This past year the agency blocked 243,548 unwanted messages (spam) with a total of 925,725 messages delivered and through our ongoing virus protection we blocked 964 various viruses, worms, and malware that could have devastating effects on the agency's ability to carry on business electronically.

## *Unusable Pesticide Disposal and Container Recycling*

For the fifth year the Department contracted with Interstate Ag Plastics (IAP) out of Buttonwillow, California. Even though the contract lapsed for a period of time so we were unable to offset any of their costs, IAP still came to AZ and collected properly rinsed pesticide containers. IAP checks the containers to make sure they have been properly rinsed, grinds them up and brings them to a facility where the recycled materials go only into products where human contact is minimal such as drainage tile, railroad ties etc.

This was the sixth year for the unusable pesticide collection program. The program was held in two locations this year at the Maricopa Ag Center and at the Dune Company, Yuma location. Yuma and Maricopa counties were the locations where the largest amounts of pesticides were pre-registered. Participants must pre-register their unusable pesticides with the department. (Unusable means the pesticides are no longer of value to the owner – it does not necessarily mean they are no longer registered – although these are acceptable as well.) The program accepts products from growers, sellers, commercial applicators, and this year even a manufacturer which includes products that the participant no longer knows what they are. Registration is on a first come first served basis.

The participants are notified of their acceptance and if there are any materials they cannot bring in. (paint, fertilizers, surfactants, oil, etc.) Emergency personnel are notified in advance of the collection event. The day of the event the participants bring their pre-registered unusable pesticides to the pre-determined collection location and the waste contractor removes the materials from their vehicle and the participants leave the site. This year times were scheduled for participants to help for a smooth flow of traffic. The waste contractor then has their work set out to categorize the wastes and ultimately have them properly disposed.

This year the events in Maricopa and Yuma brought in 15,817 and 44,392 pounds respectively. For the program this year this works out to be approximately \$1.15 per pound for disposal.

This program is made possible through the pesticide registration fees paid by the pesticide manufacturers and \$100,000 appropriation of these funds by the legislature for the recycling and disposal program. Although the legislature allowed continued appropriation for this purpose, it is likely there will not be adequate funding available since the fund balance is low.

## *Licensing*

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. With the joining of OPM licensing staff and ESD licensing staff we were able to reopen the office over lunch, as we had been closing down from 12:30 p.m. - 1:30 p.m. due to staff reductions brought about by budget cuts. The best way to get needed forms for licensure application is to access our home page at [www.azda.gov/Main/forms.htm](http://www.azda.gov/Main/forms.htm).

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

## *Industry Fees Protect Consumers*

The Non-Food Quality assurance program is funded with no general funds. The funding comes from legislative appropriation of monies collected from: an annual \$10 commercial feed license

and the \$0.20 per ton commercial feed inspection fee; an annual \$125 fertilizer license, a \$50 per brand and grade specialty fertilizer (fertilizer for nonfarm use, including home gardens, lawns, golf courses, parks and cemeteries) registration and a \$0.25 per ton fertilizer inspection fee (for the second year specialty registration and tonnage were reduced to \$40 and \$.20 respectively to help reduce the fund balance); a \$100 per product pesticide registration (this fee continued at the \$10 increase (\$110) to offset general fund budget cuts); and, an annual seed license fee of \$50 for dealers and \$100 for labelers. (These fees were set at \$0 to help reduce the fund balance.) Approximately one-half of the money collected for seed licensing is 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 2012, \$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 in agriculture pest management 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, provide written pest control recommendations, are required to earn fifteen continuing education credit hours annually.

During FY 2012 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 1148.5 hours. The number of training courses which were approved for the year was 543. This is a 26% and 36% increase respectively from the previous year. This was done through utilization of one person approving all CEU courses for both the ADA and for OPM. The response from those seeking approval has been positive, the change did not affect our ability to continue to issue timely CEU class credits.

### *Testing Center*

Tests administered by the Environmental Services Division include milk haulers, cotton seed samplers, and a myriad of pesticide-use licenses. Tests are administered in Phoenix, Monday through Friday at our office, 1688 West Adams Street. To schedule a testing appointment applicants call (602) 542-3578. For people outside the Phoenix-metro area, appointments must be made by calling 928-344-7909 (Yuma) or 520-628-6317 (Tucson).

### *Exams Administered in FY 2012*

TYPE OF EXAM	Total Exams	Number Passed	Number Failed	Passing Rate
Aerial Applicator (AAP)	3	3	0	100%
Commercial Applicator (PUC)	133	101	32	76%
Custom Applicator (CAA)	3	1	2	33%
Pest Control Advisor (PCA)	41	19	22	46%

Private Applicator (PUP)	108	80	28	74%
Fumigant Endorsement	10	6	4	60%
Milk Sampler & Hauler	75	73	2	97%
Cottonseed Sampler	1	1	0	100%
<b>TOTALS</b>	<b>374</b>	<b>284</b>	<b>90</b>	<b>76%</b>

The following chart represents the total number of licenses, permits and certificates issued by the Licensing Section during FY 2012:

<b>Licenses and Registrations Issued in FY 2012</b>	
Pesticide - Total Pesticides Registered	12249
Agriculture Use Pesticides	2353
Non-Agricultural Use Pesticides	9896
Fertilizer - Licensed Fertilizer Companies	487
Specialty Fertilizers	3522
Feed - Licensed Feed Companies	618
Seed Dealers	1279
Seed Labelers	216
Dairy/Milk Industry Licenses	353
Aquaculture Licenses	60
Egg & Egg Products	108
Meat Industry Licenses	224
Livestock Brand Certificates	2241
Equine Certificates Issued	149
Certificates of Free Sale	72
Products Certified for Free Sale	2555
Native Plant Permits Issued	241
Number of Native Plants Permitted	12555
WPS-Worker Cards Issued	5484
WPS-Handler Cards Issued	3693
WPS-Trainers Certified	109

The end of the year is very busy in licensing. The following chart represents the total number of pesticide use related licenses issued during the 2012 fiscal year all which expire at year's end. Other licenses that expire on December 31 are aquaculture, meat, dairy and pesticides. This brings an additional 12,533 licenses up for renewal during the same time of the year. Additionally, feed and fertilizer tonnage reports for the fourth quarter are due at year's end.

<b>Pesticide Use Related Credential Summary FY 2012</b>	
Grower Permits (PGP)	1162
Pesticide Sellers (PSP)	133
Ag Aircraft Pilots (AAP)	46
Custom Applicators (CAA)	49
Equipment Tags	465
Pest Control Advisors (PCA)	206

Private Applicators (PUP)	482
Commercial Applicators (PUC)	368
Pesticide Responsible Individual (PRI)	3

<i>Fertilizer Tonnage FY 2012 (in Tons)</i>			
Dry	Bulk	Liquid	Total
137,413	81,091	247,847	466,351
<i>Feed Tonnage FY 2012 (in Tons)</i>			
<b>Total 1,552,892</b>			

## Compliance

### *Pesticide Compliance and Worker Safety Program*

The Compliance Section continued to deal with staff turnover. Fortunately for personnel they find better paying jobs, unfortunate for us. This year as last we hired two Pesticide Control Inspectors. These positions conduct a number of different types of health and safety inspections at commercial and private businesses that apply pesticides in agricultural settings. This includes pesticide dealers and pesticide production establishments to ensure compliance with state and federal pesticide sales, manufacturing and bulk storage regulations. These inspectors also are responsible for the Non-Food Quality Assurance program inspections. Inspections dealing with the new federal pesticide containment regulations which deal with bulk agricultural pesticide storage and pesticide container requirements became even more detailed as the container regulations went into effect. These regulations are to ensure containers do not fail and in the unlikely event that a large container does fail, there is containment to ensure mass environmental contamination does not occur. New soil fumigation regulations are also beginning to be reviewed in a compliance assistance mode to help the regulated community better understand what is required of them.

### *Misuse is taken seriously*

The Department observes pesticide applications, mixing and loading pesticides, storage and disposal of pesticides and empty pesticide container disposal to ensure safe pesticide use. Complaints alleging pesticide misuses are promptly and thoroughly investigated. Once a complaint investigation is complete, a recommended disposition is prepared. By law no recommended disposition dealing with a third party complaint 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. In cases where facts document a violation occurred and all reviewing parties agree a violation of the pesticide laws occurred, a citation can be issued. Cited parties may request a hearing with the Office of Administrative Hearings or pay a penalty established by law for their actions.

### *Report pesticide misuse*

The ESD has a long standing Pesticide Emergency Hotline at 1-800-423-8876 where potential pesticide misuse can be reported. Arizona requires that this number be part of the required worker safety training elements so workers and handlers have the knowledge to make it easier to report

worker protection standard (WPS) violations. This line is used by pesticide applicators to request an inspector to monitor an application when spraying in sensitive areas where agricultural and urban areas interface. This number is not monitored on weekends and holidays. Applicators have had to plan ahead and contact the division in advance of weekend monitoring requests for pesticide applications. There are no formally designated Pesticide Management Areas (PMA). The Director designates PMAs. PMAs may be ag/urban interface locations and have a history of concerns known by the ADA regarding nearby pesticide applications. Complaints about pesticide misuse may also be reported by calling either of the two offices located in Phoenix and Yuma. Because we no longer have any designated PMAs, information was not sent to applicators. A reminder is posted on our website [www.azda.gov/ESD/PMA%2010%20\(3\).pdf](http://www.azda.gov/ESD/PMA%2010%20(3).pdf).

### *Restricted Use Pesticides*

Anything that makes a claim to control, mitigate, repel, kill etc. a pest is considered a pesticide in Arizona. Inspections are conducted at pesticide marketplaces to ensure that pesticides are registered with the state and the Environmental Protection Agency. Pesticides that have been manufactured in other countries and illegally imported into Arizona may pose health risks to people, animals, and the environment as they are not subject to the same safety standards, strict quality control, labeling or child-safe packaging measures as pesticides manufactured in or for use in the United States. This is also a fairness issue as those who do follow the laws to legally register their pesticides, which cost millions of dollars, are at an economic disadvantage. Inspections at pesticide dealers and on agricultural establishments ensure that pesticides classified as restricted use are sold and used only by persons who have proven their competency for certification through testing to show they understand labels and can manage the associated risks. This also ensures that agricultural insecticides do not find their way into urban settings for residential use, which can be deadly. This is a growing concern due to the increased pressures from bedbugs.

### *Agricultural Worker Safety*

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

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 on the establishment can be obtained. The law prohibits an agricultural employer from retaliating against an employee for complying with or attempting to comply with agricultural safety standards.

### *Train The Trainer [TTT] Workshops*

During the state financial year, ESD Compliance staff conducted several Pesticide Safety Train-The-Trainer Workshops in English and Spanish for new trainers and those with expired certificates. The full-day workshops were held in Maricopa, Flagstaff and Laughlin, Nevada. In addition to these workshops, ESD Compliance Industrial Hygienists also presented five, 4-hour refresher courses for current pesticide safety trainers in Yuma, Prescott and Laughlin.

### *Recertification & Training Courses*

Annual Recertification & Training Courses were held across the state. Pest Control Advisors, Certified Applicators and Responsible Parties for Pesticide Sellers were able to obtain six hours Continuing Education Units for attending the full day course on any of the following dates: November 29 - Maricopa, December 1 - Safford, or December 6 - Yuma. A total of 158 people

attended the courses which covered soil fumigants, private applicator fumigation use and numerous other topics. The courses used clickers which allowed attendees to participate and interact anonymously.

### *Groundwater Protection*

Close cooperation between the Arizona Department of Agriculture and the Arizona Department of Environmental Quality continued as coordinated sampling efforts continued with nearly 1400 analyses performed on samples from 16 different monitoring wells for the pesticides on the state's groundwater protection list. ADEQ personnel do the sampling and our laboratory does the analysis. Working as a team with ADEQ all new agricultural use products are being reviewed before registration to ensure the state's groundwater resources are protected. The funding for the analysis has been provided by the US EPA through the agencies cooperative agreement.

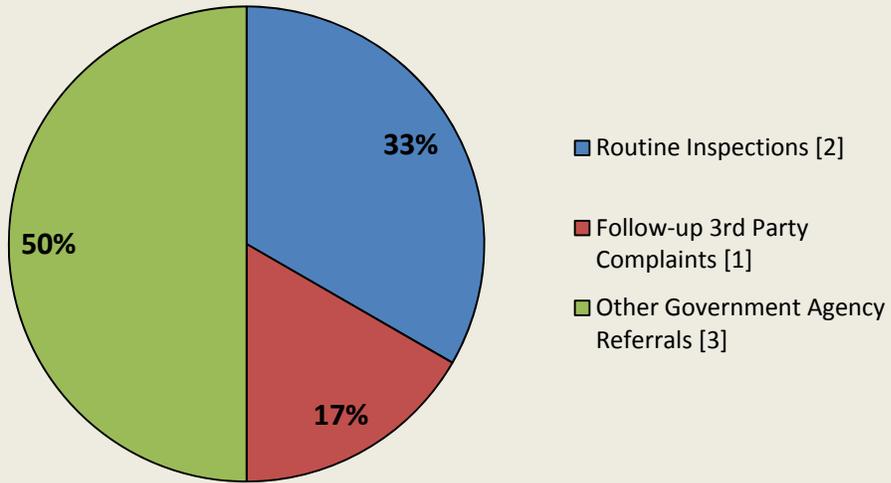
Unfortunately at the end of the year Moses Olade from ADEQ retired. He was very active in helping to make the program work. New lines of communication and cooperation will now have to be established. In todays down sized government the role of each person is important and someone new will have to fulfill his role to allow continued excellent customer service by getting pesticides for agriculture registered in a timely manner.

### *Training /Outreach /Education Activities*

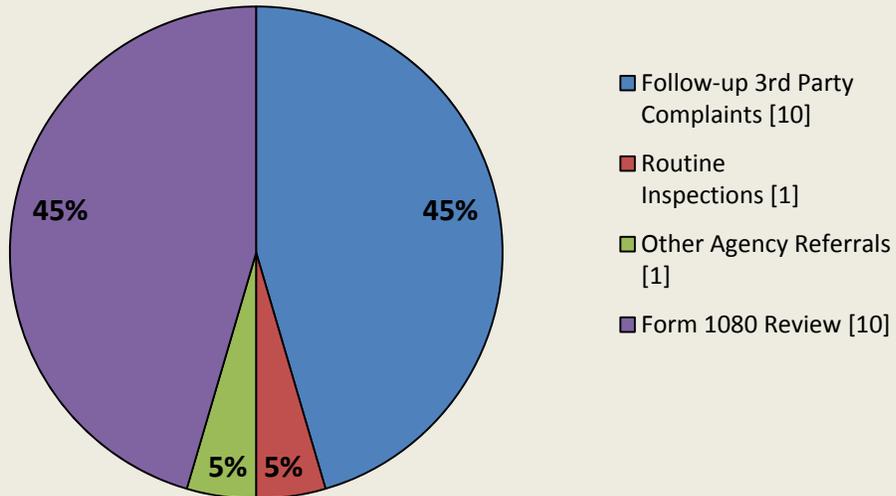
ESD staff provided training/outreach or received training and education as follows:

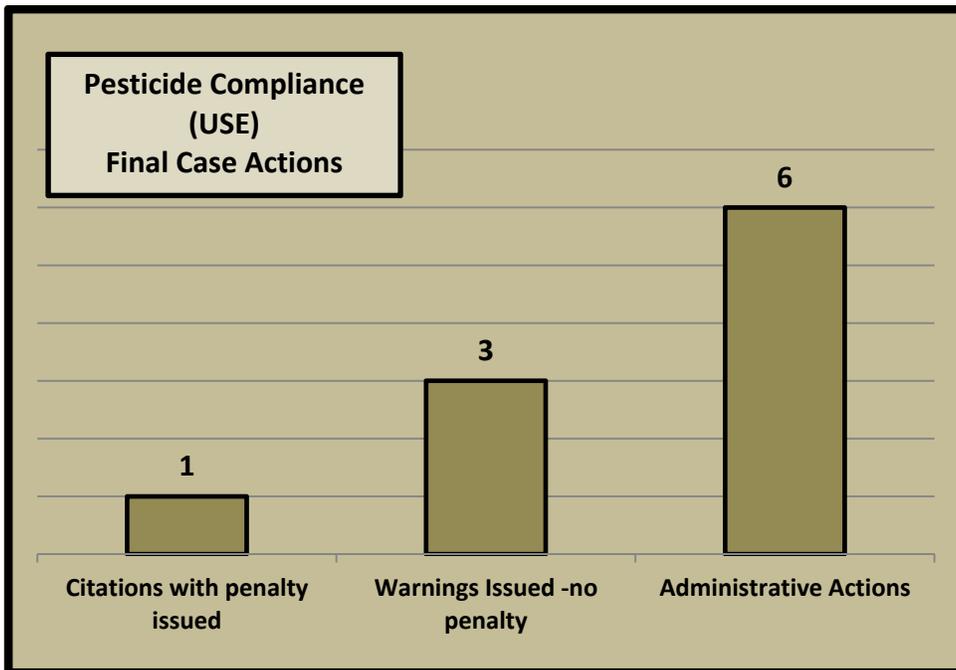
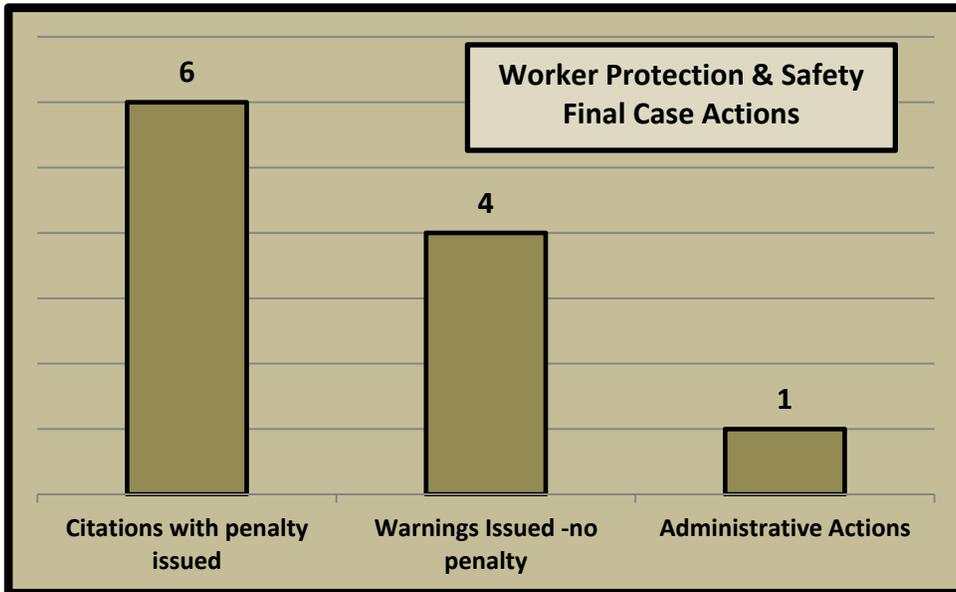
- NCIT Council on Licensure, Enforcement and Regulation (CLEAR) – Phoenix, AZ
- CLEAR National Certified Investigator Training – Pittsburgh, PA
- CLEAR National Certified Investigator Training – Milwaukee, WI
- Arizona Desert Ag Conference – Casa Grande, AZ
- Dia Del Campesino Health and Information Fair Planning Committee – San Luis, AZ.
- Dia Del Campesino Health and Information Fair – San Luis, AZ.
- 2011 Vegetable Season Worker Safety Orientation – Yuma, AZ.
- Chicanos Por La Causa – Somerton, AZ
- Heat Illness Prevention Forum – Yuma, AZ
- Arizona Interagency Farm Workers Coalition, 17<sup>th</sup> Annual Conference – Prescott, AZ
- Association of American Feed Control Officials (AAFCO) Basic Inspector Seminar, Seed, Feed and Fertilizer Training – Raleigh, NC
- Pesticide Regulatory Education Program (PREP) - Intermediate/Advanced Registration/Re-evaluation course – Washington, DC
- AAFCO Administrator's Seminar – McCormick, SC
- AAFCO, Association of American Plant Food Control Officials (AAPFCO) Summer Meeting Austin, TX
- AAFCO Mid-year Meeting – Reno, NV,
- AAPFCO Mid-year Meeting – San Antonio, TX
- The Pesticide Stewardship Alliance Annual Meeting (TPSA) – Boise, ID
- Association of American Pesticide Control Officials (AAPCO) – Arlington, VG,
- Western Region Pesticide Meeting – Cody, WY
- Southwest Ag Summit – Yuma, AZ
- Certification and Training Assessment Group (CTAG) Winter Meeting, Arlington, VG
- CTAG, Summer Meeting, St. Paul, MN
- State FIFRA Issues Research and Evaluation Group (SFIREG), Arlington, VG
- Audience Response Training – Harrisburg, PA
- National Pesticide Applicator Certification and Training Meeting – Portland, OR
- Country of Origin Labeling Training (COOL) – Washington, DC

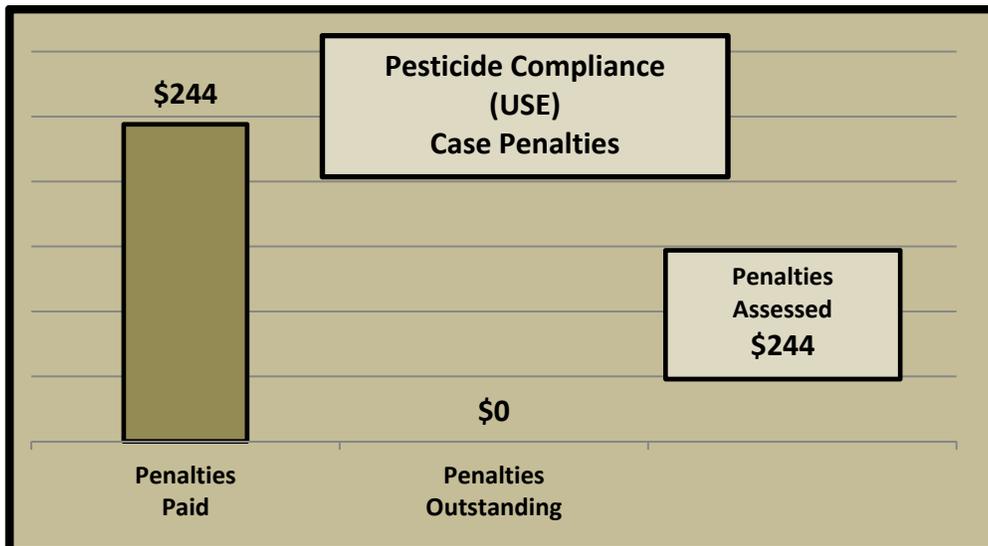
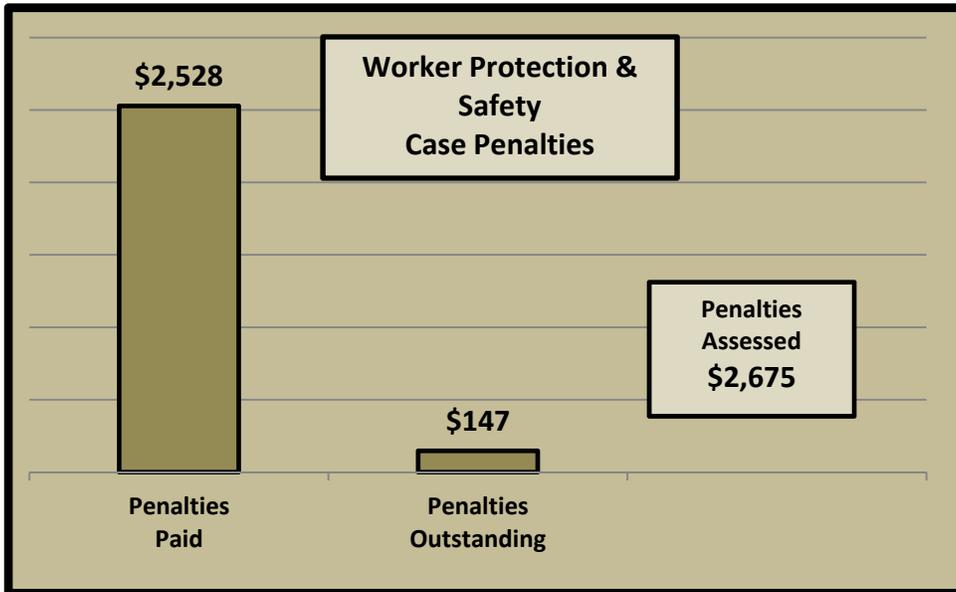
### Worker Protection & Safety Origin of Investigation Cases



### Pesticide Control (USE) Origin of Investigation Cases







**Pesticide Use & Worker Safety Violations Observed**

Pesticide Control (USE) Violations	Number of Violations
Drift / Overspray	5
Container Disposal / Storage	3
Label Violation	2
Record Keeping	2
Miscellaneous	1

<b>Worker Safety Violations</b>	<b>Number of Violations</b>
<b>Label Violation – Storage / Disposal / Transport / General Misuse</b>	<b>5</b>
<b>Failure to Train</b>	<b>3</b>
<b>PPE (Personal Protective Equipment) Safety Equipment Not Provided</b>	<b>2</b>
<b>Decontamination Site not provided</b>	<b>2</b>
<b>Application List Not Provided / Posted / Incomplete</b>	<b>2</b>
<b>Medical Emergency Information not Posted / Missing / Incomplete</b>	<b>2</b>
<b>Safety Poster not Posted / Illegible / Inaccessible</b>	<b>1</b>
<b>Unsafe Environment</b>	<b>1</b>
<b>Central Posting – Missing / Incomplete - Inaccessible</b>	<b>1</b>
<b>Operating without a valid license</b>	<b>1</b>

## Non-Food Quality Assurance

### Marketplace Inspections and Sampling

<i>Sample Analysis for 2012</i>		
<b>Sample Type</b>	<b>Collected</b>	<b>Analyzed</b>
<b>Feed</b>	87	178
<b>Fertilizer</b>	151	360
<b>Water</b>	29	69
<b>Pesticide Formulation</b>	74	52
<b>Pesticide Residue</b>	67	147
<b>Seed</b>	96	641

Pesticide control inspectors inspect and sample animal feed products, fertilizer, pesticide and seed in the marketplace to protect consumers by ensuring that products meet label guarantees. "Cease and Desist" orders are issued on unregistered products and unlicensed companies when they fail to come into compliance or if products do not pass laboratory analysis or have other issues relating to the products being mislabeled. The division has been working with other states to nationally target unapproved feed ingredients identified as having health and safety concerns.

Samples can have numerous analyses.

## *Bovine Spongiform Encephalopathy Inspections (Mad Cow Disease)*

The division, under a cooperative agreement with the Food and Drug Administration (FDA), conducts inspections of feed manufacturers and dealers, dairies and feed yards, to determine compliance with federal regulations regarding animal feed ingredients fed to ruminants and their potential for human health and safety concerns. During FY2012, the division conducted 36 inspections of facilities in Arizona. The inspections found all facilities were in compliance in keeping prohibited materials out and properly labeling of those feeds that can contain certain beef materials.

### Non-Food Quality Enforcement Actions

#### FERTILIZER

<b>TOTAL NUMBER OF CASES OPENED</b>	<b>10</b>
Division Generated	0
Routine Inspections	10
<b>NUMBER OF FERTILIZER PENALTIES ISSUED</b>	<b>4</b>
Total amount of penalties issued	\$228.87
Total amount of penalties paid to date	\$65.61
Total amount of outstanding penalties	\$163.26
<b>CEASE &amp; DESIST ORDERS ISSUED</b>	<b>12</b>
Quality Assurance Analysis Failures	8
Unlicensed Commercial Fertilizer Company	4
<b>WARNINGS ISSUED</b>	<b>7</b>
Quality Assurance Analysis Failures	4
Unlicensed Commercial Fertilizer Company	3

#### COMMERCIAL FEED

<b>TOTAL NUMBER OF CASES OPENED</b>	<b>6</b>
Follow-up third-party complaints	2
Routine Inspections	4
<b>CEASE &amp; DESIST ORDERS ISSUED</b>	<b>7</b>
Quality Assurance analysis Failures	2
Unlicensed Commercial Feed Company	5
<b>WARNINGS ISSUED</b>	<b>3</b>
Unlicensed Commercial Feed Company	3

#### SEED

<b>TOTAL NUMBER OF CASES OPENED</b>	<b>1</b>
Routine Inspections	1
<b>CEASE &amp; DESIST ORDERS ISSUED</b>	<b>1</b>
Failed QA Analysis – Germination	1
<b>WARNINGS ISSUED</b>	<b>1</b>
Failed QA Analysis – Germination	1

**PESTICIDE**

<b>TOTAL NUMBER OF CASES OPENED</b>	<b>14</b>
<b>Follow-up third-party complaints</b>	<b>7</b>
<b>Routine Inspections</b>	<b>4</b>
<b>Division Generated</b>	<b>3</b>
<b>CEASE &amp; DESIST ORDERS ISSUED</b>	<b>7</b>
<b>State &amp; Federal Unregistered Pesticides</b>	<b>3</b>
<b>State Unregistered Pesticides</b>	<b>1</b>
<b>Misbranding – False Misleading Labeling</b>	<b>3</b>
<b>WARNINGS ISSUED</b>	<b>9</b>
<b>State &amp; Federal Unregistered Pesticides</b>	<b>4</b>
<b>Misbranding</b>	<b>3</b>
<b>Records Violation</b>	<b>1</b>

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 and Desist (C&D) - A Cease and Desist 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.

Total Non-Food Quality Enforcement Actions – Fertilizer, Commercial Feed,  
Seed and Pesticide:  
Cease & Desist Orders Issued: **27**  
Warnings / Notice of Violations Issued: **20**

*Country of Origin Labeling (COOL)*

For the fourth year, the division worked under a federal cooperative agreement with USDA Agricultural Marketing Service and hired a part-time inspector to conduct inspections under the program. Inspections are conducted at marketplaces, mainly grocery stores, across Arizona checking for compliance with the federal Country of Origin Labeling (COOL) requirements. The COOL regulations apply to fresh and frozen fruits and vegetables, fish and shellfish, beef, veal, pork, goat, and lamb/mutton, chicken, ginseng, and finally peanuts, pecans and macadamia nuts. Products must bear labeling indicating the country of origin for the commodity as defined by the law. Fish and shellfish are also required to be labeled as to whether or not they are wild or farm-raised. Staff attended refresher training by USDA AMS in Washington, DC as a new electronic system for entering inspection information and reporting was rolled out.

*Arizona Grown*

This year with the availability of specialty crop block money administered by ACT we were able to work with the Arizona Nursery Association and Western Grower to submit an application and receive some funding to help set up an Arizona Grown Facebook page and website. This is to help promote Arizona Grown materials.

## Office of Special Investigations

The Office of Special Investigations (OSI) principle responsibility is conducting complex investigations involving criminal and civil violations of the Arizona Native Plant Act and the Arizona Livestock Laws and providing support to the other divisions and programs within the department. The office is comprised of a supervisor and one investigator who have gone through extensive training to investigate criminal and civil misconduct involving native plant theft and destruction; theft, killing and cruelty of livestock; illegal slaughter and processing of food animals; archeological site destruction and theft of cultural resources.

OSI responds to many calls, e-mails, letters and visitors regarding Native Plants and Livestock issues. This communication contains a diverse array of people from the public, private, government and law enforcement sectors. The communication is not always a complaint. Generally the bulk of the call, e-mail, letter or walk-in is for information and/or assistance. OSI received 6,788 telephone calls, e-mails and visitors in the Phoenix and Tucson offices: 1,977 dealt with native plant issues, 2,253 were livestock related and the remaining 2,558 communications related to other issues, i.e. training and law enforcement.

### Officer Certification, Training & Meetings

Both OSI employees are certified peace officers and as such participate in annual training both to meet officer certification requirements and to enhance investigation techniques and keep up with today's trends in the law enforcement. The OSI Supervisor is the Arizona Peace Officers Standards and Training Board (AZPOST) Training Coordinator for the Department of Agriculture and is responsible for managing the Department's law enforcement certification, scheduling training and maintaining the records of training for all department peace officers.

The AZPOST compliance division annually audits the agency records to insure the department peace officers have complied with the minimum standards. We consistently get high marks and all full time peace officers with the department completed the minimum requirements prior to the end of the calendar year.

<b>CERTIFIED OFFICER TRAINING STATUS ~ 2011</b>					
<b><i>Arizona Department of Agriculture</i></b>					
<i>Updated: 12/06/2011 – Austin – OSI</i>					
<b>Officer</b>	<b>Total Continuing Education Hours</b>	<b>Proficiency Training Performed</b>	<b>Firearms Qualification Performed</b>	<b>Judgmental Qualification Performed</b>	<b>Completed</b>
R. Acevedo	8	10/20/2010	10/28/2011	10/28/2011	✓
K. Austin	60	10/20/2010	10/20/2011	10/20/2011	✓
T. Chacon	24	10/20/2010	10/28/2011	10/28/2011	✓
R. Christensen	16	10/20/2010	10/20/2011	04/20/2011	✓
D. Drake	46	10/20/2010	10/20/2011	10/20/2011	✓
D. Hale	36	10/20/2010	10/20/2011	10/20/2011	✓
R. Porter	11.5	10/20/2010	10/28/2011	10/28/2011	✓
M. Reimer	23	10/20/2010	10/20/2011	10/20/2011	✓
T. Schultz	16	10/20/2010	10/20/2011	10/20/2011	✓
J. Servis	16	10/20/2010	10/20/2011	10/20/2011	✓

Officer Certification Records for 2011 were audited by AZPOST on: 03/21/2012 and were found to be in compliance.

The minimum standards for a peace officer of the State of Arizona is 8 hours of continuing education per year, 8 hours of proficiency training every three years, a minimum score of 210 out of 250 in an AZPOST approved daytime firearms qualification shoot and a passing score in an AZPOST approved Judgmental shoot. The chart above reflects the actual continuing education hours for the year for each officer along with the dates of qualifications in proficiency and firearms.

The Department receives \$2198.00 from AZPOST to help pay travel expenses for officers from out of town. If AZPOST sponsors the class AZPOST automatically pays the room charge. Reimbursement for per diem and mileage is paid after the officer completes the class and forwards a copy of the travel claim paid by the department to AZPOST.



Last year the Department signed onto Arizona's 1033 Program offered by the Department of Defense (DOD) Defense Logistics Agency (DLA) Disposition Services/ Law Enforcement Support Office (LESO). OSI's Supervisor is the Point of Contact (POI) for the program. The program refers to Section 1033 of the 1997 National Defense Authorization Act (NDAA) which authorizes the Secretary of Defense to transfer excess Department of Defense property to federal, state and local law enforcement agencies. There is special consideration provided to law enforcement agencies that are directly involved in counter-drug and counter terrorism activities or in what is termed HIDTA (High Intensity Drug Trafficking Areas). Because Arizona is a border state, illicit drug and weapons activity throughout the state is common place which gives many Arizona law enforcement agencies, including the ADA, special consideration.

Currently there are 17,646 federal, state and local law enforcement agencies from all 50 states and 3 US territories signed onto the program. There has been nearly \$2.1 billion worth of property transferred since the beginning of the program. The property is primarily military surplus but there are items such as mobile homes, semi-trucks, portable shower and restroom trailers, computers, radio equipment, helicopters, airplanes, boats, passenger cars and trucks.

OSI's procured 13 M16A1 rifles. The rifles will enhance officer's defensive tactics and provide protection for the officers and others when they are in HIDTA areas while performing investigations or collecting stray livestock. In the remote areas of the state it is unknown what may be stumbled upon. The rifles enable self defense with the same firepower as the traffickers giving us a better chance to survive should such an unfortunate situation develop.



Many law enforcement agencies throughout Arizona have signed onto the 1033 Program and have acquired these same rifles for their officers. Millions of dollars worth of equipment has been acquired from DLA/LESO for use by the State's law enforcement community and this has greatly enhanced law enforcement's capability to protect themselves and the people of Arizona. The U. S. Border Patrol in Arizona has provided the

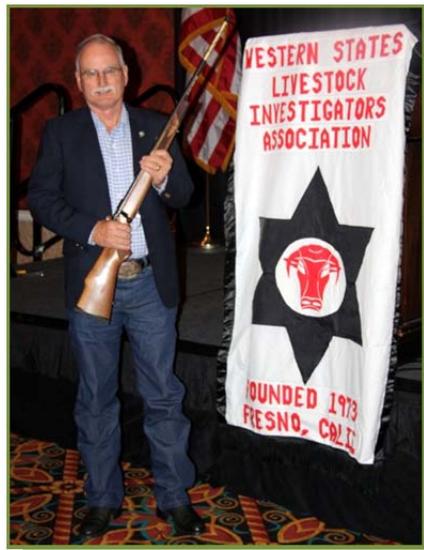
*One of the M16A1 rifles procured from DLA/LESO*

department with locking rifle/shotgun carriers for vehicles to secure the rifles and shotguns carried by officers.

OSI's Investigations Supervisor is Arizona's State Director for the Western States Livestock Investigators Association (WSLIA). The Association holds an annual training seminar and Board meeting in Reno, Nevada in March of each year. Most of WSLIA members are certified peace

officers and come from fifteen western States and Canada. The training is designed to give continuing education credit hours for the certified officers and is most often specific to rural crime and enhanced training for the rural crime officer with an emphasis on livestock crime.

WSLIA has been able to provide scholarship funds to support two member's children to help defray the cost of college. In the past WSLIA was struggling, but with the addition of a pre-conference rifle raffle, which is donated every year, scholarship funds now support two, \$1000.00 scholarships to member's children who apply.



*Greg Lawley, CDFA, 2012 rifle winner*



*2012 WSLIA member photo just prior to end of banquet*

There is usually 12 to 16 hours of continuing education training at the seminar. The highlights of this year's training was a session presented by a Superior Court Judge and a former District Attorney and now Public Defender, The session gave the group an excellent session on courtroom testimony, changes in laws, or actual courtroom case scenarios.

A session on dealing with difficult and upset people was concluded with a group of volunteers including OSI's Supervisor, participating in a heated scenario involving the seizure of horses for questionable ownership. The group debriefed afterwards and it was determined that the officers, OSI Supervisor as one, did a good job in de-escalating the situation and calming everyone down, giving them a way to resolve the issue without going to court.

There was a useful presentation by a member of the Royal Canadian Mounties pertaining to cross-border inspections and investigations and how we work together across borders with completely different laws and regulations but are still able to accomplish and complete an investigation that starts in one country and concludes in another.



*Covert camera*

There was a session on covert camera and video surveillance operations which was a practical set up outside that demonstrated how to set up and keep covert camera and video equipment from being detected and stolen.

Lastly, there was an update on animal identification and agro-terrorism. Both of these elements change annually and it is good to have a continuous dialogue and update to keep up with those changes.



In July OSI's Supervisor attended the 65th Annual meeting of the International Livestock Identification Association (ILIA) in Cheyenne, Wyoming. Arizona is a charter founder of this organization and has continued membership in the organization for all those years. The group was originally organized as the International Brands Committee and Arizona signed on as a charter founder and has had several past presidents. The emphasis of the organization is animal identification and the department continues to have a voice in animal identification with this organization by continuing

to sponsor OSI's attendance. They also support and encourage legislation that provides for laws regarding inspections of livestock for ownership. An important program within the Environmental Services Division is the livestock brand program which is an integral part of livestock identification in Arizona, throughout the western United States and Canada.

The ILIA conference is about animal identification and inspection. The session begins with a State and Province report that includes individual statistical data on numbers of the different livestock inspected in each State and Province, fees collected, and animal traceability updates for each. The Arizona Department of Agriculture by far collects the lowest amount for the inspections performed. Several State programs exist only on the fees collected for their services.

This year much of the general discussion was on livestock theft as opposed to animal identification, although they are integral partners. Thefts are on the rise, in larger numbers, and are becoming a problem in many western states. Utah for example has set up a state wide task force to address the issues there.



*Stolen no brand calf*

The dues paid in this organization help provide funds to continue a 22 state 4 province network that we can reach out to electronically on livestock theft alerts. With the current pace that a theft ring can move livestock it is important to be able to get the information out on missing livestock in a timely manner so that the member organizations can get it out to their inspection and investigation personnel quickly.

One session was presented by Dr. Mike Heaton, USDA Meat Research Center located in Clay City, Nebraska. When he went to work for the USDA he began work on host-pathogen interface which also included DNA trace-back of diseased animals of which he has now done extensive research. He and his colleagues led the DNA-based trace-

back of the first U.S. BSE case to its origin in Canada. He was also instrumental in developing cattle DNA markers for parentage verification. The ADA uses the University of California at Davis for all forensic DNA testing and Dr. Heaton's research made this possible.

Another session was from Dr. Kate Anderson, the Administrator for the Pet Animal Care Facilities Section of the Bureau of Animal Protection (BAP) within the Colorado Department of Agriculture, a long title but a formidable program and one the State of Arizona could consider. Her co-presenter was Bureau Chief Scot Dutcher. The BAP has over 130 investigators and they do over 12,000 investigations of animal cruelty annually. They are a support mechanism to local law enforcement agencies by conducting the animal cruelty investigations.



They handled 1300 equine neglect calls with 130 agents while the ADA handled over 4000 equine neglect calls with 10 officers. Dr. Anderson did have some interesting factoids. She has done extensive research on animal abuse and has learned that animal abuse occurs 80% of the time where there is also child abuse in the home. Furthermore, 71% of women who report abuse by their spouse or boyfriend state their animals have also been abused.

*Abused mule that was seized for cruelty*

The law enforcement group (badged officers) were treated to a bomb identification class on the last day which was presented by Staff Sergeant John Steele currently with Wyoming National Guard 84<sup>th</sup> CST (Civil Support Team) specializing in WMD (weapons of Mass Destruction). Sergeant Steele lived in New River, Arizona for ten years where he worked as a Ferrier specializing in foundered horses.

Sergeant Steele knows his bombs. He brought with him many different types of inert covert devices just like the ones being used today in Afghanistan and used in Iraq to kill American soldiers. He taught how to diffuse some of them if encountering one because home grown terrorist could use the same type. He demonstrated how easy it is to make a particular device that was recently used by the home grown Animal Liberation Front (ALF) which consists of four things: gasoline, a five gallon jug, a mouse trap and a shotgun shell igniter. ALF used this device to blow up several chicken farms in the recent past.



*Mesquite wood theft from AZ State Land.*

In March OSI was asked by the Arizona State Land Department (ASLD) to give them a short presentation on Native Plant Law. On April 4, 2012 OSI Investigations Supervisor and Special Investigator provided the ASLD with a two hour presentation along with many handouts. There was a lengthy question and answer session after the presentation. The group from ASLD was primarily trespass and natural resource personnel from the department along with their Program Director.

In June as a result of livestock thefts in Pinal County and around the State, OSI was asked to sit on a panel discussion of theft prevention in Pinal County. Pinal County Sheriff Paul Babeu, his Chief Deputy, and several employees from the ADA were part of the panel. There had been some bold thefts in the ranching community in and around Dudleyville and along the San Pedro river valley which has alarmed the ranchers there. SACPA (Southern Arizona Cattlemens Protective Association) had their regular meeting just before the theft meeting. SACPA comprises ranchers and interested parties from Santa Cruz, Pinal, and Pima counties and are



instrumental in getting the word out on cattle theft and vandalism problems in those counties.

The meeting was conducted by the Pinal County Sheriff's Office and discussed the initial investigation of cattle theft from a ranch in Pinal County. There was considerable detail as to the initial contact with the suspect(s) and the fact that there was not enough probable cause to hold them on any evidence at the time. Once the case details were covered we all gave input into what helps in the prevention of theft and some pointers on what to do and who to call if you are suspicious of someone. It was apparent that the public, especially the ranchers, wanted the Pinal County Sheriff's Office and ADA to work closely. Training and continuing dialogue will be forthcoming in the near future. The public present at the meeting are definitely more aware as to what they should do to assist ADA and Law enforcement in agricultural crimes.

### *Enforcement Activity*

OSI's criminal referrals were up one from last year. There were 45 cases of criminal activity involving native plants and livestock opened of which 26 resulted in successful conclusions. The number of referrals, both criminal and civil, was up slightly from last year. There are several native plant and livestock cases still under investigation pending follow up interviews, location of evidence, other agency findings and evidence analysis by the State Crime Laboratory. OSI continues to work closely with the BLM, Arizona Game and Fish, U.S. Fish and Wildlife Service and ASLD on several native plant and cultural resource cases.

### *Native Plants Investigations*

The Arizona Native Plant Law was established to protect native plants in their original growing sites. The law requires a person or business to submit an application for a permit and tag to remove and/or transport any protected native plant taken from its original growing site. The application undergoes review by the department to guarantee the land where the plants will be removed from is owned by or the person or business wanting to remove plants has the legal right to do so. It is also unlawful to destroy or dig up any protected plant without the consent of the landowner. To regulate the collection of protected native plants, the department enforces the law through investigations, legal action against violators, public awareness through the media, and permit issuance.



*A large hole with saguaro root matter at a theft site.*

Last year the Native Plant Program was in the process of re-designing the database. The new database is up and running and is working well. When a new permit is printed the inventory form and declaration page is printed along with the permit and all the necessary information is already on the forms. This has greatly reduced the time it takes to generate the complete packet for the salvager.

The new database defaults to a 90 day period of time for the removal and transportation of the native plants unless the salvager asks for more time.

There were two Native Plant cases that involved large numbers of Saguaros being taken illegally from Bureau of Land Management (BLM) lands. Both of these cases are still in the process of adjudication. The BLM is working these cases, but OSI assisted in the investigation and provided a large number of documents and manpower hours in the process.



*Saguaros at a cactus salvager's staging yard.*

During the fiscal year, OSI staff received 13 Native Plant theft reports, 8 reports of Native Plant destruction and 11 complaints of suspicious activity involving Native Plants. OSI issued 17 interstate shipping certificates on protected plants coming in from out of state. The

primary cactus shipped through this State is ocotillo. This number is down considerably from last year. Most of the shipments are from Texas. OSI relies on the shippers to contact our office to get their permits. The plants are inspected by the State of origin for pests and disease and a duplicate record of the inspection is required before we issue a permit to move across or within our State.

OSI performed 57 permitted property investigations. This process is done when we are unable to determine by aerial photography if the plants applied for removal exist on the property. We also try to perform these investigations on very large permit and tag numbers to insure that the plants are available on the property.

OSI also responded to 106 notices received from a multitude of different governmental agencies reference their intention to remove and/or destroy Native Plants as a part of construction. A notice of intent to destroy plants on a parcel of land controlled by a government agency or private property is required by law. A new Wal-Mart was built in the town of Cave Creek where a notice of intent to destroy native plants was not filed in a timely manner with the State. As a result of the investigation Wal-Mart paid a \$5000 fine (photo right).



### *Livestock Investigations*

OSI investigators routinely handle complex criminal investigations involving livestock. OSI is called upon by the Officers and Inspectors of the Animal Services Division to formulate and send out all points bulletins (APB) on missing or stolen livestock. OSI sent out fourteen APB's this fiscal year claiming 211 missing cattle and 7 horses. Of the missing livestock, 4 cattle and 2 of the horses were recovered. The remaining missing livestock on the APB's are now considered stolen and the investigations are open and ongoing.

A highlight for OSI, if you want to call it a highlight, this fiscal year is that there was only three cattle death cases (6 animals) investigated. Two cases were deemed inconclusive as to criminal activity. In the third two calves were killed maliciously by running them over with a vehicle. There are no suspects in the case and the case is still open. The number of livestock death cases is down by 66% from last year which is good. This low number of cattle death cases could be attributed to several past cases that were highlighted in local newspapers. Another contributing factor is that when there is enough probable cause for a search warrant, property is routinely seized, in

particular firearms and equipment used to commit the crime. The seized evidence is not released back to the suspect(s) until the crime is adjudicated and the defendant or suspect has completed their jail time and probationary period. At this time it is up to them to petition the County Attorney and the court to release all evidence. This sometimes can take years or they may never petition for the return.



OSI opened 11 Livestock theft investigations. There are 524 cattle reported missing and/or stolen on these cases. That is more than three times the number of cattle reported missing or stolen last year. This is widespread across the western United States and is attributed to the increased market prices for cattle and the poor economy. Eight cases are still under investigation.

*Two reported stolen horses not recovered as yet.*

Cruelty cases continue to be part of OSI's investigations. OSI has been successful in the past in adjudicating cruelty cases. OSI has a policy that requires citations be issued if we are going to assist in or perform seizure of horses under A.R.S. § 3-1721. One defendant plead guilty to two counts of cruelty and one count of false reporting to an officer and was fined \$440.00 per count and placed on probation for two years.

OSI assisted ASD with a yearlong case involving maverick cattle in the Lower Bradshaw Mountains/Upper Lake Pleasant area. The case involved all the ranchers and some private land owners in the area. There has been a ten year long dispute between two particular ranches that border one another and there are family ties to both ranches. The country is very rough and the fences have been in ill repair for many years. Consequently, through written agreements with all concerned parties and Pacific Livestock Auction over 500 maverick cattle were gathered in the area and primarily from one ranch. These cattle were sold and the funds divided between three parties claiming ownership of the mavericks.

The ADA was able to get parties to agree that it was in the best interest of all to come to agreement amongst them. The ADA would assist in any way it could to resolve the issues. The issues were twofold: repair the fences and gather all the mavericks. This has been accomplished but it did take over a year and several meetings, some a bit heated. OSI was directly involved in resolving some of the disputes and issues.

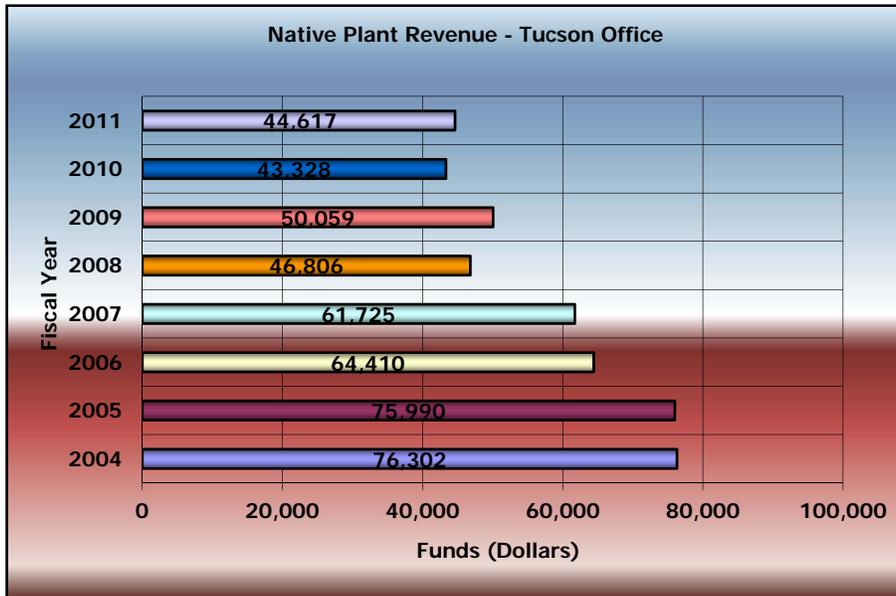
### *OSI Administrative Statistics*

During the fiscal year, a portion of the Tucson OSI investigator's duties include the issuance of native plant transportation and removal permits. The schedule is four hours Monday's and Friday's only. The Investigator can continue to perform other duties while in the office such as report writing, interviews and administrative reporting.

As a result of the administrative duties of the OSI investigator in Tucson the OSI supervisor tracks the permits and tags issued along with the revenue collected. Below is a breakdown of the permits and tags issued and the revenue collected for the fiscal year.

NATIVE PLANTS				
Permits, Tags, Seals and Revenue				
No. of Permits	Saguaro Tags	Regular Tags	Green Seals	Total Fees
310	2422	4853	13,179	\$44,617

*Number of permits, tags and seals issued and revenue received from the Tucson office for FY 2012*



*Fees collected for permits, tags and seals issued from the Tucson office over seven fiscal years.*

The poor economy has had a significant effect on the Native Plant program. As anyone can see from the above graphs tag and permit sales are down considerably. Initially OSI was tracking to see if the implementation of the inventory form was creating the down turn or the economy. When comparing permit and tag sales from month to month and year to year it was evident that the economy is having the most effect. With fewer new home construction projects in the State there is less need for desert landscapes which generally call for native plants.

One final note on OSI: It was with great pleasure that we as part of the Arizona Department of Agriculture team participated in and had a small part to play in the finding, movement and placement of the Centennial Saguaro that stands tall on the west lawn of Wesley Bolin Plaza. Several possible candidate saguaros were found, but ultimately a cactus previously moved to the capitol mall which needed relocating was moved into place as the Arizona Centennial Saguaro. This also helped save a native plant from being moved. A big thanks to the AZ Game and Fish for helping us find several potential saguaros, Tim Price Enterprises for voluntarily moving the chosen cactus, and everyone else who helped out on this project.



## Office of Pest Management

This was a significant year of change for the Office of Pest Management (OPM). The legislature passed and the Governor signed SB 1194, Laws 2011, chapter 20, section 6, giving the ADA Director oversight authority for the Office of Pest Management (OPM). (The OPM is the regulatory agency for pesticide use not in the agricultural setting.) The legislation required the Director to appoint an OPM Acting Director, which due to the similarity in function – pesticide regulation, the ESD Associate Director was appointed. On July 13, 2011 the entire OPM office and staff moved from its Scottsdale location into the first floor of the Agriculture building to work alongside all the ADA employees.

### *Staff Allocations*

The OPM has allocated 30 full-time employee positions with 20 of them being filled as of June 30, 2012. At the beginning of the fiscal year there were 40 positions. A request was made to and approved through the legislative process to reduce this number to 30. Six of these positions are in the field and are responsible for all the inspections and complaint follow-up.

### *Task Force on the Regulation of Structural Pest Management*

Senate Bill 1194, Laws 2011, chapter 20, section 6, also required the Director of the Arizona Department of Agriculture (ADA), to appoint an eight member Task Force (TF) to study the regulation of structural pest management in Arizona particularly as it relates to the following four items:

1. A review of all laws and regulations governing structural pest management in this state.

2. A review of possible organizational configurations within the Arizona department of agriculture for structural pest management regulation.
3. A review of personnel and funding issues relating to the administration of structural pest management regulation within the Arizona department of agriculture.
4. Statutory changes necessary to accomplish the future structural pest management program.

The Task Force held 10 meetings. The Task Force developed a regulatory package that is less burdensome and yet continues to provide adequate protections for the public. They understand the fine line between protecting the public and not being overly burdensome to the regulated community. Everyone sees this line a bit differently, but the Task Force feels that it has reached an acceptable solution.

The Task Force believes that the OPM could become part of the ADA and be placed under the supervision of the ADA Director and Associate Director for ESD. However, the Task Force received advice that maintaining the ADA and the OPM as separate agencies that continue to work cooperatively under an intergovernmental agreement would be better at this time. Accordingly, the Task Force's proposed statutory changes as it currently stands, leaves the OPM as a separate agency, but under the direction of the ADA Director.

The Task Force members have spent a great deal of time and effort developing proposed statute and rules. The proposed statutes are set up to cover general authorities, which is similar to how the ADA's statutes are written. To go along with this, the corresponding rules are written to provide clarity and detail to what is required by statute. Currently structural pest management statutes in Title 32, chapter 22 of the Arizona Revised Statutes contain a lot of detail. These details must be moved to rule if the legislature chooses to adopt the Task Force's proposed statutory changes, otherwise there will be tremendous loss in clarity for regulatory oversight. Upon passage of the proposed statutes by the Legislature, the OPM plans to immediately adopt the proposed rule changes using a temporary exemption from the requirements in Title 41 of the Arizona Revised Statutes.

The recommended revisions of the OPM's statutes and rules will also change the OPM's funding structure. Currently the OPM receives a large portion of its funding through the TARF (termite action report form) fees. This funding imbalance creates two problems: 1) a heavier burden on companies involved in termite work compared to pest control companies that do not do termite work and 2) the perception that the industry that pays the TARF fees has greater control over the OPM. The proposed funding structure is based primarily on the number of applicators a company has rather than the type of company. Larger firms with more pesticide applicators will pay more than smaller firms. Significantly, the new funding structure will also intentionally result in a net decrease in the revenue to the OPM. This will reduce the overall fee burden on the industry while still providing sufficient operating monies to the OPM, which through the help of the ADA has reduced its costs.

The areas of greatest discussion during the Task Force meetings fall into the following broad categories:

1. Termite Action Reporting Form - continuation and fees.
2. Qualifying Party - continuation and qualifications to obtain and broaden
3. Criminal background investigations - not being required or done by the state
4. Business names - why is the OPM involved
5. Record keeping - what is appropriate to allow regulatory oversight to protect the public.
6. Golf course regulation - where does it fit - ADA or OPM
7. Devices - what should be regulated
8. Political subdivisions - what requirements should apply

The final report from the Task Force to the legislature must be submitted by December 15, 2012.

## Information Technology

The IT side of the move was a great concern as the IT Section had to complete the integration of IT systems. This was a combining of the existing Windows systems of the Agriculture Department with the open source systems of the Office of Pest Management. This has resulted in a cohesive system that fully supports both entities as a single operating agency. This was completed with no down time for either Agency during the integration phase and no customer outage for citizen-client data submission to either agency.

## Licensing

License or Registration	Received/ Processed	New/Broaden Issued	Overall Issued	Did not follow through	No. of Licensees end of FY2012
Applicator	8075	1002	7436	639	6729
Qualifying Party	1879	122	1573	306	1527
Business	1214	119	1214	0	1182
Branch Office	65	22	65	0	65

The Office of Pest Management (OPM) has an internet based license renewal system – RenewEZ; which processed 77% of all renewals received in FY2012. The OPM also fingerprinted 573 applicants for background investigations and held 18 Applicant Review Committee hearings for applicants with criminal convictions that resulted in 16 approvals and 2 denials. The business and qualifying party (QP) license renewals occur from November 1 through January 30<sup>th</sup>. The applicator license renewals occur April 1 through June 30<sup>th</sup>.

## OPM Testing

To show competency in the application of pesticides, an applicant must be licensed. To be licensed an applicant must score at least a 75% on their respective license exams. A new applicant must pass the Core and at least one Category-Specific exam. To broaden an existing license, a licensee must pass the category specific exam that they applied for. Since July of 2003, The OPM's exams have been administered by Metro Institute, Inc. (Metro), an independent testing vendor, by way of a computer-based testing system. Applicator and Qualifying Party Applicants submit their application to the OPM. Upon approval of the application, the OPM transfers the applicant's OPM issued ID number, the applicant's name, license type, and categories the applicant is eligible to take to Metro. Metro has test centers in Phoenix, Glendale, Tucson, Flagstaff, Prescott, Kingman, and Yuma.

The contract for providing the testing services expired this year, but was extended temporarily as it went out to bid and potential applicants were able to prepare proposals to meet the request for proposals requirements. The successful bidder will be awarded in the fall of FY2013.

The following table shows the total number of exams administered over the last 9 fiscal years:

Fiscal Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
No. of Exams Administered	5,067	5,825	8,585	7,732	7,145	4,833	4,467	4,111	4,284

## *OPM Exams Administered in FY 2012*

License Type	Exams	Total Exams	Percent Passed	Average Passing Score	Average Failing Score	Average Attempts
Applicator	Core	1210	69.2%	84.3%	65.3%	1.5
Applicator	Aquatics	13	76.9%	82.4%	61.2%	1.1
Applicator	Fumigation	22	72.7%	79.8%	63.3%	1.4
Applicator	Fungi Inspection	3	66.7%	79.3%	62.9%	1.5
Applicator	General & Public Health	942	58.2%	82.7%	67.4%	1.8
Applicator	Turf & Ornamental	214	58.9%	83.6%	63.8%	1.6
Applicator	Wood-Destroying Insect Inspection	435	56.3%	81.7%	67.5%	1.6
Applicator	Wood-Destroying Insect Management	399	63.7%	84.5%	65.7%	1.6
Applicator	Weed & Right of Way	607	51.9%	82.8%	63.8%	1.8
Qualifying Party	Core	176	56.2%	80.9%	67.5%	1.8
Qualifying Party	Aquatics	3	66.7%	82.5%	72%	1.5
Qualifying Party	Fumigation	0	n/a	n/a	n/a	n/a
Qualifying Party	Fungi Inspection	0	n/a	n/a	n/a	n/a
Qualifying Party	General & Public Health	93	73.1%	84.3%	69.0%	1.5
Qualifying Party	Turf & Ornamental	18	88.9%	86.4%	71.7%	1.1
Qualifying Party	Wood-Destroying Insect Inspection	46	69.9%	81.2%	71.3%	1.3
Qualifying Party	Wood-Destroying Insect Management	66	54.5%	80.8%	67.65	1.8
Qualifying Party	Weed & Right of Way	37	78.4%	84.8%	64.6%	1.2
<b>TOTALS</b>		<b>4284</b>	<b>66.4%</b>	<b>82.6%</b>	<b>66.5%</b>	<b>1.5</b>

The average number of attempts is greater than one, which shows that many of the applicants are unprepared before taking the exam for the first time. This also is reflected in the "percent passed". We strongly recommend that applicants study before attempting to take any test. The OPM has a list of recommended study materials, from which the exams were created. Additionally, the OPM offers Initial License Training classes and is aware of at least two private entities that offer initial examination training on a regular basis.

# Compliance Section

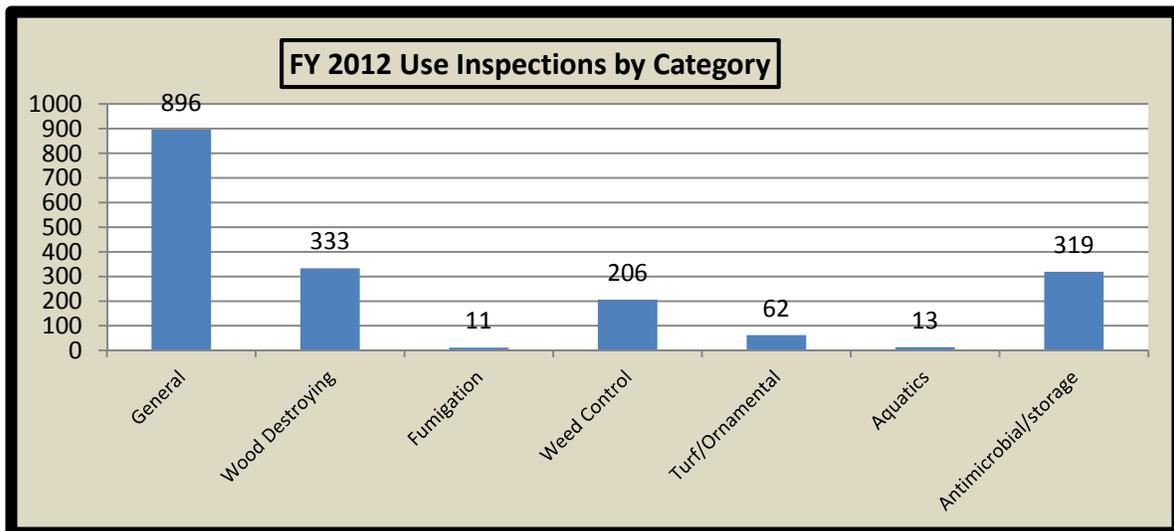
## Inspections

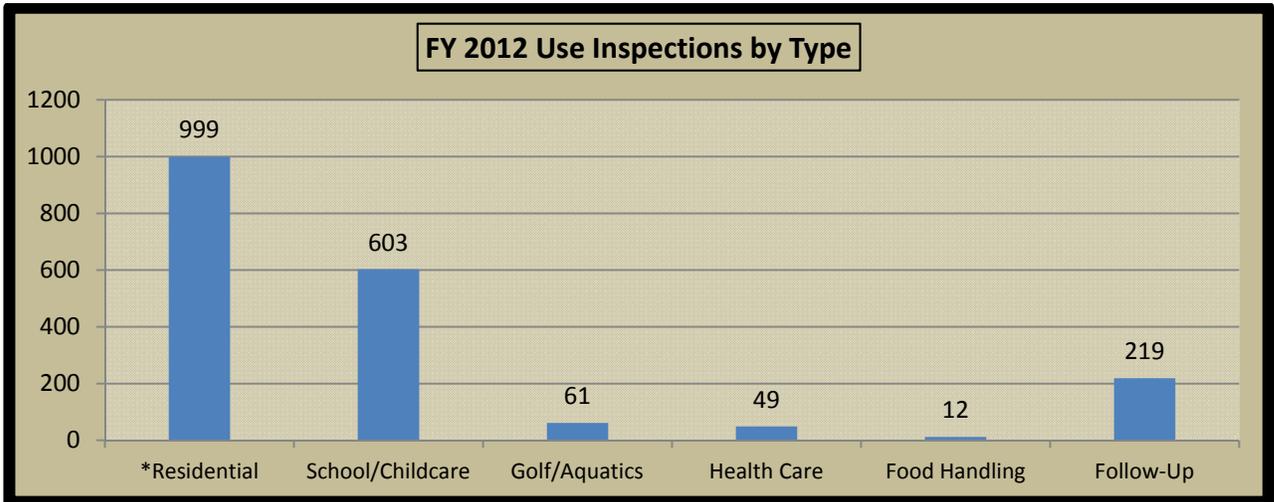
### Pesticide Use inspections

One of the goals of the Office of Pest Management (Office) Compliance Section is to protect the public by taking steps to reduce the incidence of pesticide misuse. The Office accomplishes this goal by conducting field inspections of applicators engaged in the application, storage, and disposal of pesticides. In recent years, the Office has focused its attention on monitoring the use of pesticides in areas the EPA terms, "underserved communities" or those areas where the misapplication of pesticides is most likely to have negative impacts, such as: schools, childcare facilities, and health care facilities. Compliance inspectors visit these facilities to review pesticide treatment records to ensure that the pesticides used were labeled for use in such locations and applicators were licensed and therefore knowledgeable about pesticide usage.



The Office's six compliance inspectors performed 1,840 pesticide use inspections which encompass all categories for which the Office issues licenses and in many different settings, including residential, food-handling, schools, childcare facilities, golf courses, and health care facilities. Based on a cooperative agreement with the EPA, Compliance staff, performed inspections covering the use of antimicrobial products (disinfectants, sanitizers, etc.). In fact, 255 of the 1840 pesticide use inspections are associated with the use of antimicrobial products. While the average person may not ever consider the storage or use of an antimicrobial product as meriting an inspection, more than 5000 of these products are registered by EPA to be *pesticides*. Although individuals are exempt from the state licensing requirements for using these products, the products themselves can and do pose a risk to those that are exposed to them, primarily due to their common use in areas with sensitive populations like child care and health care facilities.





**FY 2012 Use Inspections – Type and Number of Violations**

<b>Target:</b> Pesticide applied to target pest not listed	<b>1</b>
<b>Method:</b> Application method prohibited by label	<b>3</b>
<b>Site:</b> Pesticide applied to site not listed on label	<b>1</b>
<b>Dilution:</b> Use of mix rate above label rate (or below in the case of pretreatment)	<b>4</b>
<b>Rate:</b> Pesticide applied above label rate (or below in the case of pretreatment)	<b>15</b>
<b>Personal Protective Equipment:</b> Not wearing label required protective equipment	<b>11</b>
<b>Unlicensed Applicator:</b> Pesticide applied by applicator not properly licensed	<b>17</b>
<b>Tag Monitor:</b> Proper quantity, strength, dosage applied	<b>189*</b>

*\*Inspectors note that a violation occurred any time the gallons applied varied from what the inspector determined were required; however, there were only two instances this year where this variance was large enough to warrant a formal complaint.*

### *Pesticide Records and Storage Inspections*

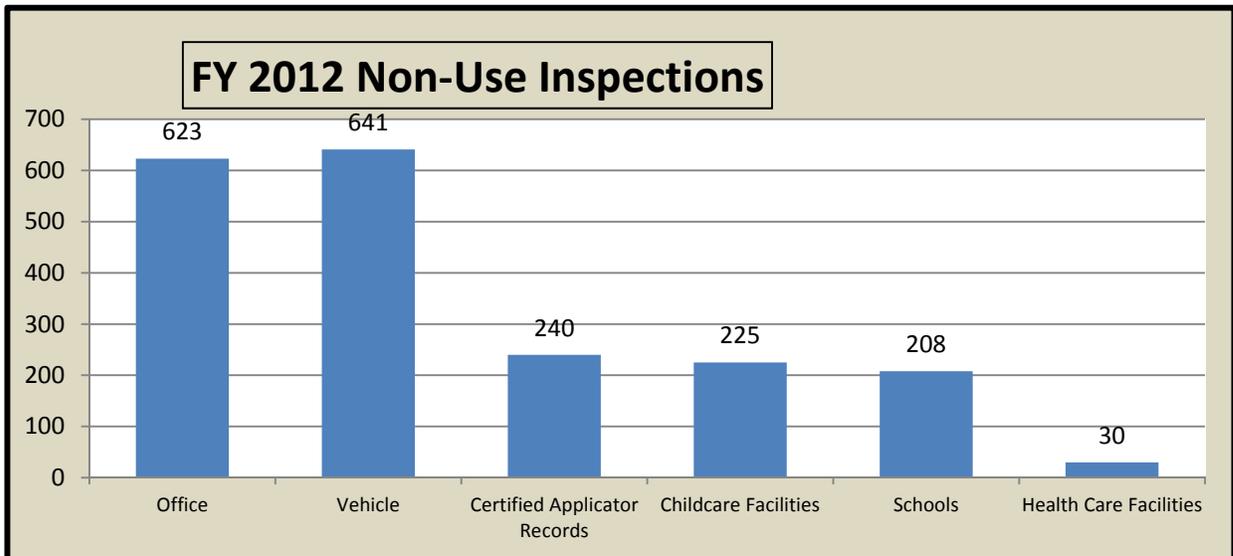
Inspections of pesticide application records and pesticide storage areas are performed at offices and on service vehicles operated by pest control businesses. The maintenance of accurate treatment records is essential as it allows inspectors to determine if a pesticide was applied correctly, (e.g. could the pesticide be applied in food handling establishments? Did the applicator apply the correct amount based on the size of the area? Etc.) sometimes months or years, after the application occurred.

Ill-maintained pesticide storage areas and malfunctioning pesticide application equipment pose potential dangers to the environment as well as to those that work in or around them on a daily basis. Regular inspections of these storage locations and



*Unlabeled pesticide container found in storage area*

application equipment ensure that licensees remain diligent in maintaining them free from hazards and in good working order. The Offices' inspection data continues to demonstrate that a proactive inspection program provides positive results. The Office's compliance staff conducted 1,967 non-use inspections, noting 273 violations in FY2012. The charts below detail the number and type of inspections conducted as well as the type and number of violations observed.



### FY 2012 Office Inspections - type and number of violations

<b>Records:</b> Not maintained/incomplete/not approved/statement of precaution/WDIIR	<b>69</b>
<b>TARF:</b> Not maintained/not filed	<b>16</b>
<b>Applicator:</b> Work out of category/unlicensed	<b>8</b>
<b>Pesticide Storage Facility:</b> Lighting/ventilation/signage/Unlocked	<b>26</b>
<b>Pesticide Container:</b> Missing or illegible labels/disposal/storage	<b>12</b>
<b>Public/Environment:</b> Spill containment/Fire Extinguisher/Labels/MSDS	<b>26</b>
<b>Applicator/Employee Safety:</b> Wash facility/First Aid/Poison Control #	<b>15</b>

### FY 2012 Vehicle Inspections - type and number of violations

<b>Vehicle:</b> Missing signage or signage not visible	<b>52</b>
<b>Pesticide Storage area:</b> Lighting/ventilation/signage/Unlocked	<b>61</b>
<b>Pesticide Container:</b> Missing or illegible labels/damaged	<b>17</b>
<b>Public/Environment:</b> Spill containment/Fire Extinguisher/Anti-Siphon/Labels & MSDS/Unsafe or leaking equipment	<b>65</b>
<b>Applicator Safety:</b> Personal Protective Equipment/Extra Clothing/Water/Wash Facility/1 <sup>st</sup> Aid/Med info/Poison Control #	<b>82</b>

### *Pretreatment monitoring*

Despite the continued sluggishness in the construction industry, the Office continues to observe new home and commercial construction in most parts of the State. Inspectors utilize follow-up inspections, also known as "Consumer Protection Monitors (or CPMs)", to determine if consumers received a termite pretreatment that complies with state and federal requirements. This monitoring program does (not) disrupt the work schedule of a business, qualifying party or applicator, as it does not involve interaction with them, unless a violation is found. Rather, the inspector, visits newly constructed sites and views the pretreatment tag the applicator is required to attach to the site, after completing the pretreatment. Then, the inspector measures the site, calculates the amount of termiticide that should have been applied, and compares his findings with the information reported on the tag. The inspector uses the pretreat tag to not only verify the proper

quantity, strength, and dosage, of termiticide to a site, but also to determine if the business engaged in the termite control market is reporting the treatments to the Office as required by Law. In FY 2012, OPM inspectors performed 219 Consumer Protection Monitors.

## Investigations

The Office conducted 130 inquiry investigations in FY 2012 with approximately 42% of these becoming formal complaints. The Office obtains information that leads to an inquiry investigation from a number of sources. The sources of investigations include consumers, licensees, agency Staff, or referrals from the USEPA or other State or local government agencies. The Office investigates any allegation for which it has jurisdiction. This year 56% of inquiry investigations originated from allegations of pesticide misuse or unlicensed activity. The 58% of investigations that never proceeded beyond the inquiry phase were cases where the OPM did not have jurisdiction, where no violations were substantiated, or where the violations were minor in nature and did not merit a formal complaint. Many of these were adjudicated by other means, including compliance assistance (CA) or corrective work orders (CWO's). The chart below details the type of allegation and its originating source.



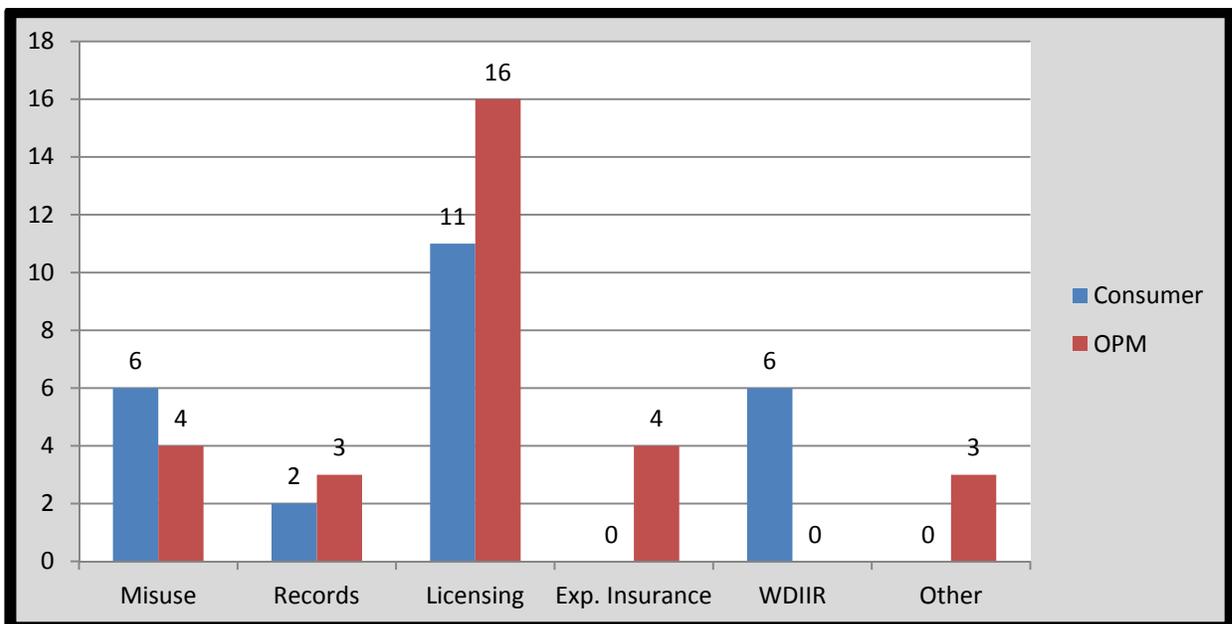
<b><u>Allegation</u></b>	<b>Consumer</b>	<b>OPM</b>	<b>Other</b>	<b>Totals</b>
Pesticide Misuse	21	8	1	<b>30</b>
WDIIR	4	0	0	<b>4</b>
Unlicensed Business	21	13	5	<b>39</b>
Unlicensed Applicator	3	5	1	<b>9</b>
Expired Insurance	0	17	0	<b>17</b>
TARF	2	10	1	<b>13</b>
Recordkeeping (not TARF)	6	5	1	<b>12</b>
Failure to treat (3 <sup>rd</sup> occ. or FG)	1	1	0	<b>2</b>
Felony (fail to disclose conviction)	0	2	0	<b>2</b>
CWO (failure to comply)	0	1	0	<b>1</b>
Other	1	0	0	<b>1</b>
<b>Totals</b>	<b>59</b>	<b>62</b>	<b>9</b>	<b>130</b>

*Other includes licensees and referrals from other government agencies*

## 55 Complaints filed in FY 2012



*Other includes (1) failure to disclose or conviction of a felony, (1) failure to perform final grade, (1) fail to comply with order.*



*Other includes (1) failure to disclose or conviction of a felony, (1) failure to perform final grade, (1) fail to comply with order.*

### Complaints and the Complaint Database

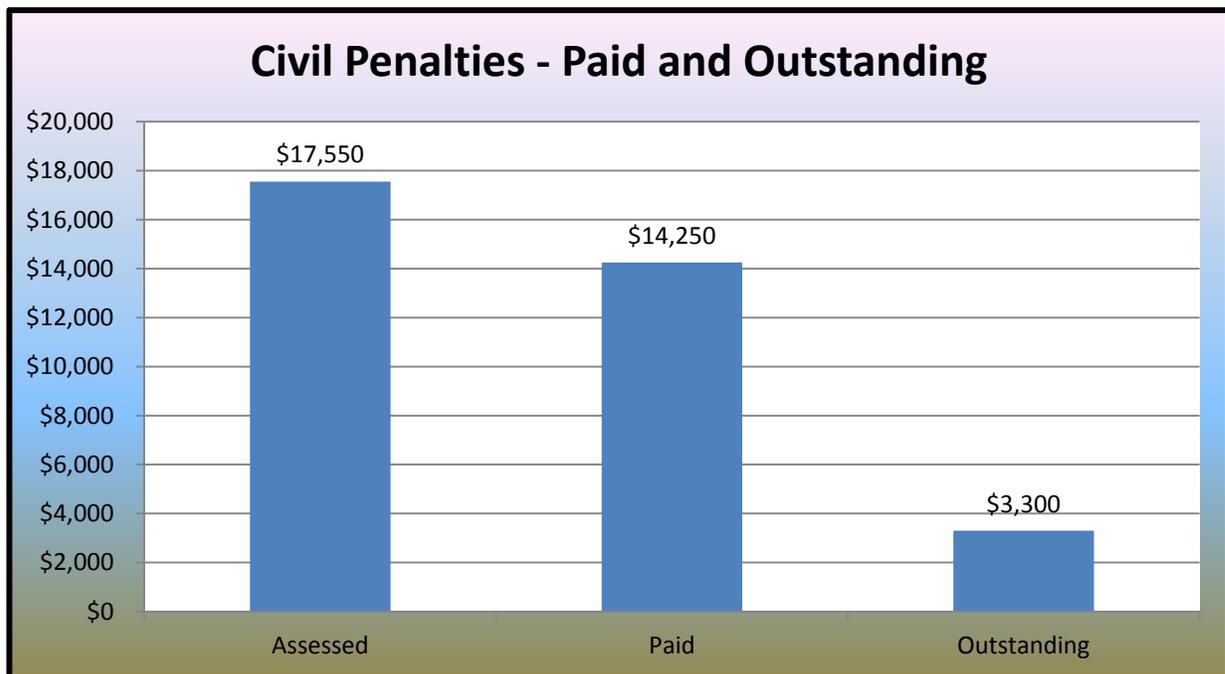
The OPM issues a citation only after the Compliance Manager, Attorney and Acting Director have conducted a thorough review of the investigative report and have determined that a violation meriting disciplinary action has occurred. To maintain consistency, the Compliance Manager utilizes an Enforcement Response Policy (ERP), which takes into account case specific factors, and provides guidance in the determination of the appropriate disciplinary action. Penalties may include, administrative warnings, civil penalties of up to \$1000, or license suspension/revocation for the most egregious violations. In FY 2012 the OPM issued discipline in 63 complaints. Thirty-three were filed in FY2012 and the remainder originated in prior fiscal years.

Consumers can visit <http://www.sb.state.az.us/ComplaintSearch.php> and view the complaint history of any respondent whom the OPM has opened and adjudicated a complaint. The database can retrieve the record via case number, license number or the respondent's name. If one simply desired to view all of the records for a specific period, one could simply input the "from

date” and “to date” to retrieve those records for that time block as well as view the Citations and Consent Agreements in Adobe Acrobat format. These documents provide a brief description of the facts as well as the discipline rendered, which may include any of the following.

<u>Type of Disciplinary Action</u>	<u>Number</u>
Administrative Warnings	35
Civil Penalties	22
License Suspensions	2
License Revocations	0
Dismissals	17
Conditions w/o probation	1
Notice's of Correction	1
Cease and Desist Orders	16
Advisory Notices	2

Cases often include more than 1 type of disciplinary action.



## Industry training and outreach

### *Initial Licensing Training (ILT)*

ILT is a long standing program designed to assist entrants into the field of structural pest control in preparing for Arizona’s applicator licensing exam. The program supplements the written study materials and covers topics in safety, pesticide labels, laws and regulations, as well as pest biology. In FY2012 compliance staff provided ILT classes in Phoenix, Tucson, and Yuma for 164 people.

<u>Date</u>	<u>location</u>	<u>Number of attendees</u>
October 14, 2011	Phoenix	21
February 9, 2012	Phoenix	31
March 13, 2012	Tucson	18
April 12, 2012	Phoenix	25
April 26, 2012	Yuma	36
May 10, 2012	Phoenix	20
June 7, 2012	Phoenix	13

*Initial License Training provided in FY2012*

### *Continuing Education (CE)*

Individuals holding licenses issued by the Office are required to obtain 6-hours of CE per year prior to the expiration of the license, which (currently) occurs at the end of December for Qualifying Party license holders or May for Applicator license holders. There are numerous entities that offer “for fee” CE to licenses, including the OPM. The Office believes it has a place in providing CE, especially as it relates to updating licensees on new or pending regulation. The Office also understands there are others more appropriately qualified to educate industry members in new pesticide technologies, equipment, application techniques, and business practices. It is with this understanding and after requests from the private CE industry that the OPM scaled back its CE offerings this fiscal year. The Office anticipates that it will continue to offer CE to licensees in the future especially as new regulations come about. In FY2012 compliance staff provided CE classes in Phoenix, Tucson, Yuma and Prescott to 183 people.

<u>Date</u>	<u>Location</u>	<u>Number of Attendees</u>
October 7, 2011	Phoenix	15
October 20, 2011	Yuma	27
March 9, 2012	Phoenix	68
March 22, 2012	Prescott	48
March 23, 2012	Tucson	25

*Continuing Education provided in FY2012*

### *New Pesticide Labeling*

In June of this year, as a result of labeling changes mandated by the EPA, manufacturers of pesticides containing synthetic pyrethroids were required to begin placing new labels on products formulated with such ingredients. These products are, and have been, some of the most widely used pesticides in the structural pest industry and these mandates will undoubtedly affect Arizona’s pest control industry in the months and years to come. Since many products containing the older labels were still in the channels of trade, the OPM saw very few pesticides with the new, more restrictive labels, this year. Despite this, the OPM, along with local pesticide distributors, and state professional organizations, dedicated time and effort into informing local end users about the changes and advising them to be aware and to remain diligent in reviewing pesticide labels so they are not caught off guard by the changes. The Arizona Pest Professional Organization (AZPPO) created an informative presentation regarding the labeling changes and compliance staff, with AZPPO’s permission, distributed it to a number of licensees during inspections.

Rodenticide labels also underwent a major revision. Major problems were that the use was limited to specific pests: Norway rat, roof rat and house mouse. Use was also limited to use within 50 feet of a building. The OPM/ADA heard from industry right away about how important the use of these materials is for controlling wood rats (pack rats). As a result a Special Local Need (SLN) label was submitted to the EPA for the use against pack rats. We also worked with other organizations to

help in getting the labeling modified to allow use of the rodenticides within 100 feet of manmade structures.

### *Compliance Assistance*

Compliance assistance (CA) is offered in lieu of a formal complaint in cases where a violation occurred but was not egregious, it caused no human or environmental harm, and where more benefit is derived from the CA than there otherwise would be with a more severe penalty. As an example, in November 2011 the Office investigated allegations that a licensee, working on behalf of a local school district, failed to provide the school with the proper 72-Hour notification prior to a herbicide application. Under previous administration such a violation would have resulted in a complaint. However, there was no human or environmental harm and the Office determined that the parties involved would derive more value from CA than some other sanction via complaint. This is particularly true in this case because, not only did the school district arrange for the applicator to receive the training, but also for 20 of his coworkers as well. The one-hour presentation developed by the OPM provided a detailed look at the requirements of A.R.S. 32-2307. Another example involved a large pest control firm whose applicators, on three separate occasions, failed to provide childcare facilities with the proper pesticide notifications. Rather than follow the "3 strikes, you're out!" rule, the OPM Compliance Manager communicated with a corporate member of the company, which resulted in the company reserving a reception hall at a hotel and invited 46 supervisors and managers to attend a mandatory class the OPM provided on proper pesticide notifications. In FY2012 compliance staff provided 3 Compliance Assistance classes, resulting in a total of 74 applicators being trained.

### *A partner to the regulatory community*

The OPM's compliance program has been a model to other states in the development of their compliance programs and its staff has always been available to offer assistance to its regulatory partners. In years past, the agency has provided hands-on-training to staff of the Nevada Department of Agriculture's structural pest control regulatory division in termite pretreatment monitoring and various Native American Tribes in Arizona. At the June 12 – 14, 2012 Tribal Inspector Training, sponsored by the Inter-Tribal Council of Arizona, OPM Acting Director and the OPM Compliance Manager offered training to tribal inspectors regarding Laws and Creating an Inspection Program. At the presentation's conclusion an Environmental Compliance Officer with the Tohono O'odham Nation asked if the OPM would be willing to provide more detailed training in aspects of conducting inspections related to pesticide applications for termite control. The OPM offered an OPM Inspector from Tucson to coordinate efforts with a termite pretreatment company to train the tribal inspector. On the day of the pretreatment, the tribal inspector was provided a step-by-step demonstration on the methods and rationale for conducting such inspections. Undoubtedly this training will be beneficial to the Tohono O'odham Nation and in fact, additional training is already planned for FY 2013. On June 21, 2012, Alan Pugh (Compliance Supervisor) and Norman Maeser (Inspector) conducted a joint investigation with the Colorado River Indian Tribe regarding an OPM license holder who operated on tribal land. The OPM Compliance staff always stands ready to work with other regulatory agencies.



### *School and Childcare Visits*

State law requires that pesticide applications in schools and child care facilities be performed only by *licensed* persons and only after the licensee provides the school or child care facility with a minimum of 72-hours advance notification. This fiscal year, inspectors visited 433 school and child care facilities to confirm that pesticides were applied by appropriately licensed persons, and that

employees, students, and parents were provided the proper information and warnings of impending pesticide treatments. In cases where the inspector discovered that a licensee failed to supply the required posting materials, and as long as no harm resulted, the licensee was provided a one-time opportunity for compliance assistance. This program, which was provided to 74 licensees, seeks to protect Arizona's young ones, by instilling into industry members the importance of complying with A.R.S. 32-2307, while avoiding untimely legal proceedings.

### *Inspector on Duty (IOD)*

The OPM maintains a toll free phone number (1-800-223-0618) that provides the public with an easy way to report pesticide misuse, unlicensed activity, or to ask one of the Office's compliance inspector's questions. Inspectors are assigned, on a rotating basis, to answer these phone calls from 8:00 a.m. to 5:00 p.m., Monday thru Friday. Messages left over the weekend are disseminated to the "On Duty" inspector by 8:00 a.m. the following Monday.

## Plant Services Division (PSD)

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The mission of the Plant Services Division is to safeguard agriculture, food and the environment from the risks associated with the entry, establishment and spread of plant pests, diseases and noxious weeds thereby promoting agricultural sustainability, market access and competitiveness.

## 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's 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 a serious pest threat presently pressuring Arizona is the 2009 detection of the Asian Citrus Psyllid (ACP) in Yuma County. The ACP is a pest threat in its own right, but with its ability to potentially vector Citrus Greening, noted to be the world's most destructive citrus disease, ACP has become a pest of significant concern to the State of Arizona.

As a result of the 2009 detection of ACP in Yuma County, the Plant Services Division intensified its detection activities for this pest. Vigilant detection activities are presently in place across the state, focusing on commercial citrus, high risk residential citrus areas, as well as providers of citrus nursery stock. The Division quickly responded by implementing a response program and a plant quarantine on host commodities in an effort to reduce the risk for the pest to spread to other areas of the state and to protect the export capabilities for commercial citrus fruit. These activities, accomplished in concert with industry and public outreach, increase the probability of the early detection of future ACP infestations and the mitigation of potential damage which could occur if adequate safeguarding measures were not in place. Coordination between state and federal agencies and stakeholder partners is an imperative key to limit the ability for this pest to spread and to ensure Arizona can maintain a viable foothold in the citrus fruit and citrus nursery stock markets. As of August of 2012 there have only been thirteen interceptions of the pest, the last of which was in December 2011. Eleven of the detections were confined to a limited portion of Yuma County. Single detections in both Pima and Santa Cruz Counties were classified as regulatory incidents that since no other ACP were detected during an expanded survey. The ACP quarantine boundaries have remained unchanged since June 8, 2010.

### *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 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 Light brown apple moth that can have a serious effect on a number of plant species or the Asian long-horned beetle that is a devastating wood borer.

### *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 efforts to exclude, detect and mitigate exotic species establishment, the Arizona Department of Agriculture protects the quality of Arizona life and market access for our agricultural commodities produced here.

### *Arizona's Most Unwanted Pests*

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



Photograph by: University of Florida



Asian citrus psyllid adult –  
ADA-PSD

Regulatory restrictions are in place for Florida, Georgia, Puerto Rico and portions of California, Texas, Louisiana and South Carolina for citrus greening; for Asian citrus psyllid, Alabama, Texas, Mississippi, Florida, Hawaii, Guam, and portions of Louisiana, California, South Carolina and Arizona.

- **Pecan Weevil** – attacks the pecan nut, causing serious crop loss. The larvae (grubs) develop inside nuts and destroy the entire kernel by their feeding process. The nearest infestation of pecan weevil is

in New Mexico. Arizona Administrative Code R3-4-231 restricts the entry of pecans, other nuts, and firewood to prevent movement of pecan weevil into the state.



**White larvae (grubs) destroying the inside of a pecan -**  
H C Ellis, University of Georgia



**Mature weevil -**  
Clemson University - USDA Cooperative Extension

- **Red Palm Weevil** – The red palm weevil is a major plant pest of palm trees and was discovered for the first time in the U.S. in 2011 at a residence in California. The red palm weevil can have severe effects to production date palms and other ornamental and native palms found in Arizona.



**Adult Red Palm Weevil -**  
John Kabashima, UC Cooperative Extension



**White larvae (grubs) with cocoon made from palm fibers -**  
Mike Lewis, Center for Invasive Species Research

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



**Japanese beetle adult -**  
David Cappaert, Michigan State University



**Adults feeding on a grapevine leaf**  
- USDA



**Japanese beetle grubs destroy turf by feeding on underground roots –** M.G. Klein, USDA-ARS

**Gypsy Moth** — is one of the most destructive defoliators of hard and softwood trees. Gypsy moth caterpillars feed on the leaves of more than 500 species of trees and shrubs. Larvae damage trees by eating the foliage, which weakens and eventually kills them, affecting the aesthetic value of forested areas and urban landscapes.



**Gypsy Moth Larvae** - USDA Forest Service



**Gypsy moth larvae have eaten most of the foliage from this tree** - Haruta Ovidiu, University of Oradea

- Fruit Flies**



**Fruit Fly Larvae** – FDACS-DPI

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



**Adult Mexican Fruit Fly** – Jack Dykinga, USDA-ARS



**Fruit Fly Larvae** – FDACS-DPI

- Red Imported Fire Ant**

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



**Imported Fire Ant** – ADA-PSD

## *Inspections*

Inspection staff assigned to three operational locations (Phoenix, Tucson, Yuma) function as the primary safety net against pests of concern. Inspectors carry out a variety of duties including survey and detection pest trapping, 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. High risk locations and commodities that have the potential to harbor a dangerous plant pest are inspected by the Division's inspection personnel.

## *An Overview*

In FY 2012, inspection staff intercepted 12,080 pests within the state's interior through various inspections; 1,128 of the pests intercepted were identified as pests of concern; 1,357 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.

## *Biological Identification Group*



Photograph by: ADA-PSD

With the Division's addition of the Biological Identification Group, identification of potential dangerous plant pests can be made accurately and quickly. This affords inspection staff the ability to respond in a more timely fashion to pest interceptions reducing the cost of potential eradications and minimizing the impacts on commerce.

## *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 division's pest interception effort. This is a highly important component of our agricultural safeguarding system. Realistic trap densities are one aspect of this system that may fluctuate within certain geographical area based on certain risk factors. The main risk factors are:

- Availability of suitable hosts
- Climate conducive to the pest
- Evidence of potential pest pathways within a community or local area, such as:
  - Densely populated areas
  - Frequent travel to infested areas
  - Availability and demand for exotic fruits, vegetables and other plant material
  - Gardening groups and clubs specializing in rare plant propagation
  - Mail parcels from infested areas
  - Major ports of entry (land and air) and transportation routes
  - Wholesale marketing centers and street vendors
  - Historical trapping results

All of these risk factors must be taken in to consideration when determining trap densities. Arizona is a state with extreme uniqueness in climate, host distribution, and key potential pathways. As a result of

this uniqueness, a distinctive risk level description and resulting rotational strategy is required to allow trappers to efficiently and effectively safeguard Arizona from exotic pests.

The following sections outline the details of the risk levels, minimum density requirements, and rotational strategies. These details are meant to be a guide for Operational Units to use in developing each area's trapping plans. Within these guidelines, consideration should be taken by adjusting to the uniqueness of their area while maintaining a required level of accomplishment.

Statewide, an average of 11,781 traps were placed, serviced and monitored throughout FY 2012 for up to 14 targeted pest species. A majority of these traps are regularly serviced up to 3 times a month increasing their effectiveness for detecting a dangerous plant pest before a major infestation is discovered.

### *Aggressive Detection*

Foreign nations require scientific data to ensure that pests that inhabit Arizona will not harm their crops. Because the division 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.



Fruit Fly adults –  
FDACS-DPI

The division's exotic fruit fly detection efforts involves monitoring an average of 3,191 traps placed statewide and currently meets or exceeds the Federal trapping protocols.

In FY 2012, 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. Several devastating pests exist within the nut producing states surrounding Arizona, but Arizona still enjoys a pest free status. The division has developed and implemented a detection strategy to monitor for the introduction of several of these pests, including the Hickory Shuckworm, the Pecan Nut Casebearer, the Pecan Weevil and the Walnut Husk Fly. Inspectors place traps in both commercial and residential pecan environments in order to monitor for an introduction of these devastating pests. In addition,



Commodity Inspection -  
ADA-PSD

Arizona pecan cleaning facilities are inspected during the cleaning season each year to ensure Arizona pecans are pest free and therefore able to enter the export market unhindered.

Hand in hand with producers and industry representatives, the division 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 trap -**  
Chris Evans, River to River CWMA

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. The division 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.

## *Asian Citrus Psyllid/Citrus Greening*

Citrus in Arizona is a popular choice by many for the production of citrus fruit and nursery stock, and as an ornamental landscape in many areas of the state. Citrus is now being threatened by a pest called the Asian citrus psyllid and the disease it can carry, citrus greening or Huanglongbing. The Plant Services Division has trained inspectors that carry out a number of pest detection methods to detect the first sign of the pest or disease. The Division, and through a partnership with the USDA, has deployed over 10,000 insect traps statewide. This endeavor has been successful in allowing the Division to quickly respond and prevent further spread of ACP and greatly reducing the risk of introduction of citrus greening.



Photograph by: ADA-PSD

## *Khapra Beetle*



Photograph by: ADA-PSD

To secure the exportability of grain and stored dry products produced in Arizona, methods are in place to detect early infestations of the devastating Khapra beetle. The Khapra beetle is one of the world's most destructive stored-product pests. It is difficult to control once introduced into a region because it feeds on a variety of dried materials, is resistant to insecticides, and can go long periods without food. Infestations can result in up to 70 percent grain damage, making products inedible and unmarketable.

## European Corn Borer

The European corn borer is a damaging pest that can jeopardize the quality and exportability of corn grown in Arizona. The products that are produced for export can be surveyed for European corn borer to meet the entry requirements of other countries and/or states. Corn products that are imported into Arizona must meet the entry requirements defined in A.A.C. R3-4-228: European Corn Borer.



European Corn Borer  
Larvae - Keith Weller,  
USDA-ARS

## Japanese Beetle



Japanese Beetle Adult-  
Stephen Ausmus, USDA-ARS

The Japanese beetle is an aggressive feeder and reproduces at a high rate. They can destroy turf grasses, ornamental plants, and many vegetable crops common in Arizona. High risk areas are monitored for the pest and imported host product must meet entry requirements found in the National Japanese Beetle Harmonization Plan.

## Commitment to Service

The Plant Services Division 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, PSD has demonstrated its commitment to service by the following:

### Export Certification

The division administers certification programs to facilitate interstate and international movement to agricultural commodities. However, due to staffing reductions, the Division has transferred responsibility for Federal Phytosanitary Certificate issuance back to USDA-APHIS in most geographies of the State.

- **Domestic shipments of nursery stock**

In FY 2012, inspectors issued 1,732 single shipment certificates for shipments of agricultural commodities to other states. Nursery stock accounted for 47 certificates.

- **Voluntary nursery inspection certification program**

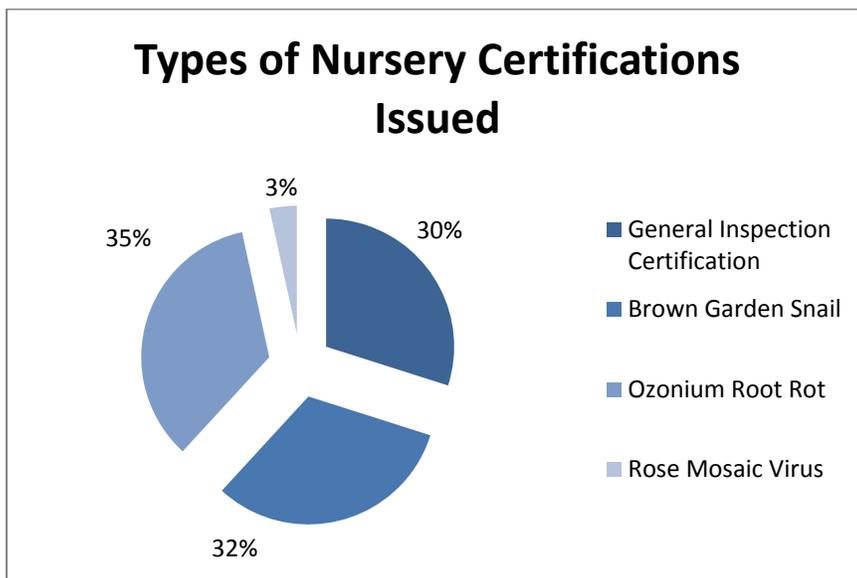


Photograph by: ADA-PSD

In safeguarding the market access of Arizona produced nursery stock, certification programs exist to certify a commodity to meet the requirements of other states. Arizona produced nursery stock most often is required to have a "General Nursery Stock Certification" (A.K.A. Arizona Certified) that attests to the general health and freedom of dangerous plant pests. Some states also require certification for specific pest threats (i.e. Ozonium root rot, Brown garden snail, Rose mosaic, etc.).

The Division is now the steward of a Clean Citrus Stock Program, under Director’s Administrative Order DAO 11-6, which allows citrus nursery stock providers to participate in a program that focuses on maintaining a pest free status from the Asian citrus psyllid. The program allows establishments inside an area under quarantine, within the state, for the Asian citrus psyllid to move their product to areas outside of the quarantine under strict safeguarding measures. Some of the key guidelines for citrus nursery stock are that material is produced in an approved screenhouse and follows a treatment and inspection protocol.

The Division processed 532 applications during calendar year 2011 from Arizona nurseries requesting certification to comply with the entry requirements of other states, and issued 351 individual certificates following inspection of the applicants’ properties.



### Global Market Access

Successful verification of the integrity of our pest detection 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 division issued 1,357 Federal phytosanitary certificates for the international export of agricultural commodities.
- The Division received 322 applications for phytosanitary field inspection of seed crops for international export. 26,420 acres were inspected and found free of pests and diseases.

#### Seed Crops Inspected

Cotton .....	16%
Vegetable.....	68%
Grass .....	1%
Grain .....	15%

## *Export Enhancement*

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

## *Rules and Regulations*

Regulatory restrictions safeguard Arizona's agricultural commodities by providing guidelines by which regulated material can, or cannot, be move into and/or within the state. These restrictions come in the form of statute (Arizona Revised Statutes (A.R.S)) and rule (Arizona Administrative Code (A.A.C.)). Regulation is a key component that allows PSD to manage commodities that are high risk for transporting a serious plant pest or disease and secures the marketability domestically and internationally for Arizona agricultural commodities that that otherwise might not be possible.

## *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
Onionweed	Floating water hyacinth

## *Cooperative Effort*

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

1. Regulated noxious weeds found within the state may be quarantined to prevent further spread. If the regulated noxious weed in not quarantined, the department shall provide the grower with technical information on effective weed control activates through integrated pest management.
2. Restricted noxious weeds found within the state shall be quarantined to prevent further infestation or contamination. Commodities or land may be quarantined until eradication is complete.
3. Prohibited noxious weeds are prohibited from introduction into Arizona.

At the beginning of FY 2012, 14 Weed Management Areas (WMA's) were actively pursuing control or eradication goals, mapping local weed distributions and conducting public information programs in Arizona.



**A site in Arizona, that was previously infested with Kudzu vine, shows the before and after results of successful control measures to contain a potentially invasive weed.**

Photographs by: ADA-PSD

### *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** – Billy Craft

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



**Floating Water Hyacinth**  
– Ted D. Center, USDA-ARS

Another highly used method for the distribution and sale of noxious weeds are through internet sales on peer to peer auctions and sale sites. Some noxious weeds may be pleasing to the eye and are often easily cultivated, making them a marketable resource for some home growers. These sellers, often from another state, are many times unfamiliar with regulatory restrictions in Arizona and may inadvertently be the cause of an infestation of a noxious weed.