

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**

FY2013 – 2014

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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. Relatedly, AHWP protects the public from diseases which are transmissible from livestock to people. Field staff in AHWP enforce all ownership and dominion laws as well as specific equine neglect and livestock cruelty statutes. Additionally, via the State Emergency Response and Recovery Plan (SERRP), AHWP is involved in a myriad of human and animal welfare contingencies. Lastly, 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

There were a total of 53 Administrative Orders issued this fiscal year. The vast majority were involved with a scrapie disease trace that began in a goat in Mesa. Five other Administrative Orders were issued in conjunction with suspected Equine Infectious Anemia horses or Tuberculosis cows, all of which were defined as negative.

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

- Brucellosis
- Tuberculosis
- Pseudorabies
- Equine Infectious Anemia
- Scrapie

Ongoing state / federal / industry programs for the benefit of public health:

- Rabies control
- West Nile Virus and other equine encephalomyelitides (zoonoses)
- National Poultry Improvement Plan (control of multiple diseases)
- Animal Disease Traceability
- Multiple obligations under the Emergency Support Functions of SERRP

USDA Cooperative Agreements

Traditionally various animal health surveillance programs have been funded via grants with the United States Department of Agriculture (USDA) / Animal and Plant Health Inspection Service (APHIS) / Veterinary Service (VS). These have primarily included avian health, cattle health, and zoonotic concerns.

April 1, 2014 began the new reporting year for USDA / APHIS / VS. Their agreements fall into one of two categories: Animal Disease Traceability (ADT) or Umbrella (general program disease surveillance).

Animal Disease Traceability System

The ADT cooperative agreement will be in furtherance of goals that have been in place for several years – specifically that of improving trace back of animals after a given disease has been identified in livestock. The goal is to be able to trace back to origin any disease within 48 hours of its recognition. This is a

challenging goal that will not be met for several years. Testing of the system began in the last months of this fiscal year but has not been completed.

Umbrella Grant: Foreign Animal Disease (FAD) Surveillance Program

Early recognition of an FAD is essential to reducing the impact of a devastating disease outbreak.

Arizona Livestock Incident Response Team (ALIRT) investigations involving livestock were conducted during this reporting period in conjunction with the Arizona Veterinary Diagnostic Laboratory (AZVDL). All were found to be indicative of plant toxicities or confirmed as such. No FADs were identified during the investigations.

Arizona's voluntary National Poultry Improvement Plan (NPIP) was recently established for hobbyist and exhibition poultry and game bird breeding flocks and products. The state already has an NPIP program for commercial producers. Even though the newly established NPIP program is voluntary, any person moving hatching eggs, chicks, or older birds across state lines may be required to become NPIP-certified in order to meet the other state's entry requirements and the new Federal Interstate Movement Law requirements.

A swine component was added to the grant beginning June 15, 2014. The main objectives of this component are to control the spread of and minimize the effects of swine enteric corona virus diseases.

Annual Licenses

Aquaculture

The Aquaculture Program regulates commercial operations that grow, transport, and process fish and shrimp. These are the numbers of issued licenses: 19 transporters, 7 processors of fish and shrimp for human consumption, 24 growing facilities, 6 research and educational facilities, and 4 operations that charge a fee for fishing.

Feedlots

Twenty feedlot licenses were issued. This is only required for feedlots with 500 or more head of beef cattle.

Inspection Data Tracking

During the majority of FY 2014, the Livestock Inspection Program tracked field activities through our internal software system. Beginning in April 2014, we started tracking our field activities through the State Forester's WildCAD dispatch 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 4,100 producers are approved to use the Self-Inspection Program. Livestock owners understand the value of documenting animal movement and have accepted responsibility for intrastate documentation through Self-Inspection certificates. Livestock Officers, Inspectors, and Deputies document non-Self-Inspection activities such as the sale of range cattle and custom slaughter livestock.

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 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's Department of Veterinary Science Veterinary Diagnostic Laboratory and Cooperative Extension. USDA Wildlife Service and Veterinary Service actively participate in a program designed to facilitate the potential diagnosis of unexplained livestock losses. Once a problem has been discovered, various levels of response may be initiated. 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 and 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 at 602-542-4293 or the University of Arizona Veterinary Diagnostic Laboratory at 520-621-2356.

Meat and Poultry Inspection Program

The Meat and Poultry Inspection (MPI) Program is a federal-state cooperative program, funded 50% from the state General Fund and 50% by USDA / Food Safety Inspection Service (FSIS). The program oversees slaughter and processing 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 MPI personnel monitor general plant and equipment sanitation, processing sanitation, good manufacturing practices during production, ante mortem and post mortem inspection at slaughter, humane handling, Hazard Analysis Critical Control Point (HACCP) implementation, multi-ingredient formulation, the use of approved labeling, net weights, and perform laboratory sampling programs as requested. They also verify compliance with state and federal regulations prior to allowing the inspected and passed triangle shaped “mark of inspection” to be applied to applicable products.

ADA inspectors receive training including HACCP inspection procedures, Sanitation Standard Operating Procedures, and animal ante mortem and post mortem inspection procedures for disease.

Each day a plant operates, an MPI employee makes at 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 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 is performed 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 is actually as the label states and that the label meets all labeling requirements 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 Agricultural 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," which are firms that process meats, game, and poultry for the personal consumption of the 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 Agricultural Laboratory to be analyzed for E-coli 0157:H7, non-0157 Shiga Toxin E-coli (STEC), Salmonella, Listeria Monocytogenes, or violative antibiotic residue. Additionally, antibiotic residue samples requested by USDA / FSIS and Tuberculosis samples from suspect animals at slaughter were also taken. All of this information is entered each day by the inspectors into a new computer database system mandated this year for state meat inspection programs by FSIS called the Public Health Information System (PHIS). This new system required hundreds of hours of training by the Program Manager and Supervisor to the inspection staff. This included the initial set up and loading of the database and training of all staff in the use of the new system.

Nearly 7,000 on-site food safety inspections were performed at official establishments and custom exempt facilities this past year. No food borne illnesses or food safety recalls were reported in Arizona official establishment this past year.

Meat and Poultry Compliance Program

Compliance is an integral part of the MPI Program. Arizona Revised Statutes provide the authority and responsibility to protect consumers by assuring meat and poultry products are wholesome, not adulterated, and properly labeled. In-commerce surveillance and reviews are conducted at distribution centers, public warehouses, retail stores, restaurants, schools, prisons, and poultry exempt facilities. Surveillance reviews are conducted to ensure industry compliance and consumer safety. These surveillance reviews consist of product and facility assessments, food safety, sanitation, hazard control, and labeling assessments.

Compliance also investigates food safety, misbranding, and other violations of law to protect public health and to support criminal, civil, and administrative action. An investigation includes; planning, decision-making, evidence collection, identification, custody, interviews, photographic evidence, reports of investigation, and investigative liaison with attorneys. The program is authorized to identify, detain, and control adulterated, misbranded, illegally imported, and other illegal or unsafe meat and poultry products so they do not reach consumers.

If requested, Compliance will assist with food safety related illness outbreaks and epidemiological investigations. This consists of conducting product trace back and trace forward. The program coordinates with USDA and various statewide health departments in conducting surveillance reviews and investigations of retail stores and restaurants to ensure that meat and poultry products are wholesome and properly labelled. Compliance will also conduct investigations of illegal slaughter and/or processing operations statewide. Compliance has a database of over 100 licensees which include; warehouses, distributors, jobbers, dead stock haulers, brokers, and meat storage.

Dairy & Dairy Products Inspection Program

Dairy inspection staff regulate all aspects of the dairy industry, from the dairy farm until products leave the processing plant. Beginning at the farm, inspectors review plans submitted for construction of new farms and the remodeling of existing farms. Farm inspections are conducted to check for compliance in sanitation, milking procedures, equipment condition, and usage/labeling of drugs for animals, along with other requirements. Water and milk cooling systems are reviewed and sampled for compliance with public health standards.

Milk produced is sampled and tested for compliance with regulatory requirements. Bulk milk tankers, which are used to collect and transport milk to processors, are inspected and licensed by the Dairy Inspectors. These inspectors regulate dairy processing plants ranging from small cheese makers to plants processing millions of pounds of milk per day. At plant inspections, inspectors review plant processing records, and facilities are inspected for compliance with sanitation and maintenance requirements. Pasteurization systems are tested quarterly and the controls are sealed by the inspector. If regulatory seals are broken for maintenance or repairs, the plant must immediately notify the Dairy Program, and the equipment must be retested and sealed by the inspector or a licensed industry sealer. Arizona milk processors use a variety of approved pasteurization processes. These processes include the relatively simple batch pasteurizer and proceed in complexity to systems called Ultra Pasteurization, which greatly extend the shelf life of dairy products.

Inspectors also check packaging/bottling facilities and processes at dairy plants. Some facilities manufacture containers and closures for dairy products. These facilities are also inspected and their products are sampled and tested.

Finished milk and milk products are collected by Dairy Inspectors and submitted to the State Agricultural Laboratory for testing. On average, almost 3,000 samples are collected and submitted each year.

Universal Sampling System

Regulations require regular testing of milk produced by "Grade A" dairy farms. In Arizona, dairy farms are spread out over a large geographic area. Under the "Universal Sampling System," milk hauler/samplers are licensed by ADA after passing an exam. These hauler/samplers are also evaluated in the field by Dairy Inspectors to ensure that their procedures are correct. The samples collected by licensed hauler/samplers may be randomly tested by the state and the results used for official purposes. This system reduces the personnel and driving time that would be required if the state had to collect the samples from each individual farm.

Raw Milk Consumption

The majority of milk and milk products produced in Arizona are pasteurized. This means that the milk was subjected to a process of heating and holding it at a specific temperature for a specified time period (161° Fahrenheit for 15 seconds, for example) using approved equipment. This process is used to kill harmful microorganisms which may be present.

A small amount of milk sold in Arizona is packaged and sold as raw milk for consumption. This milk is not subjected to the pasteurization process. Although this milk is required to meet the same standards as pasteurized milk, it can potentially contain pathogenic organisms. For this reason, raw milk for consumption is required to have a warning statement on the label so consumers can be informed of the potential risk. It is illegal, in Arizona, to sell raw milk for consumption without a license.

Interstate Shipment of Milk

Arizona participates in the National Conference on Interstate Milk Shippers (NCIMS). This program creates uniform standards for evaluation of "Grade A" milk and milk products. This allows for milk to be transported between states and accepted via reciprocity. The Food and Drug Administration (FDA) certifies state personnel, who then conduct audits, called ratings on producers and processors that wish to be listed as Interstate Milk Shippers (IMS). The FDA periodically conducts check ratings to assure uniformity in the system.

The NCIMS is also responsible for changes and updates to the Pasteurized Milk Ordinance (PMO), which is the main document used to regulate "Grade A" milk and milk products. The NCIMS convenes every two years to consider and vote on proposed changes. Arizona is a voting delegate at these conferences.

Egg & Egg Products Inspection Program

Egg Inspection Program staff provide inspection services to the public, industry, and 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 inspect shell eggs and egg products from production at laying facilities, wholesalers, and retail stores. Inspectors verify that products have been produced in accordance with statutes and are held at temperatures of 45° Fahrenheit for eggs and 0° Fahrenheit for frozen egg products. Inspectors also verify proper packaging, sanitary handling, dating, and weighing of eggs at production facilities, warehouses, and retailers for products originating out-of-state.

Eggs processed or sold in Arizona are marked with mandatory expiration dates and have one of the shorter code dating requirement at 24 days from packing. This helps to ensure that eggs continue to meet the marked grade after they are purchased by consumers.

USDA Inspection and Grading Program

The Department also maintains cooperative programs with the USDA to provide “grade labeling” services to the 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. 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. Seven full-time 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 grade marks 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.

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

The Department 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 U.S. 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 2014 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.

FY 2014 Calls for Service from the Public

Inspections	
Ownership	4,252
Butcher	1,367
Highway and Road Kill	<u>72</u>
Total	5,691
Welfare	
Equine	817
Cattle	188
Goats	50
Sheep	6
Swine	18
Other	<u>1</u>
Total	1,080
Out of Place	
Loose and Stray	858
Theft	<u>25</u>
Total	883
Other	
Administrative	650
Dogs Chasing/Killing Livestock	10

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 89.6 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, and honeydews.

The top ten commodities, which account for 85% of the state's total produce production, based on carton count for fiscal year 2013 are as follows:

Iceberg lettuce	23,448,232	Cabbage	3,785,527
Romaine lettuce	17,229,697	Broccoli	3,325,700
Cantaloupe	9,507,459	Spring Mix	3,317,097
Leaf lettuce	5,392,560	Cauliflower	2,956,785
Spinach	4,760,135	Honeydew	2,669,039

As detailed below, the Citrus, Fruit and Vegetable Standardization Program and the Federal State Inspection Program conducted 22,416 inspections last year. In addition, the Citrus, Fruit and Vegetable Standardization Program issued 551 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 at total of 23.3 million packages, with more than 2.5 million packages of field tomatoes, 641 thousand packages of greenhouse tomatoes, 1.9 avocados and 16.1 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 35 signatory shippers that represent 97% 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 and agricultural workers. 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. 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.

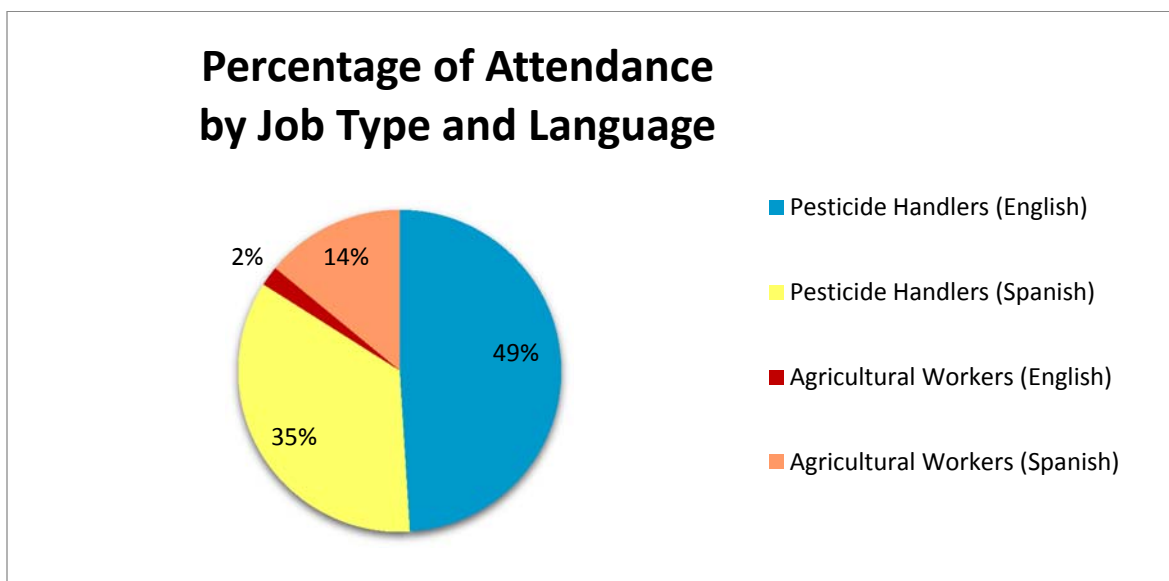
The training courses are provided in English and Spanish and are open to anyone who would like to attend. The courses are also promoted to safety trainers who want to observe a training to gather ideas for their own sessions and growers who would like to learn more about state and federal laws pertaining 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 2014, ACT staff presented pesticide safety training to 897 people who were employed by 144 agricultural operations, landscaping companies, tribal communities and governmental agencies.

A two-hour pesticide handler course was provided to 754 people who planned to mix, load, and apply pesticides. The course was presented in English to 442 people and in Spanish to 312. Of the handlers, 18 licensed applicators participated to receive an EPA Pesticide Training Verification card and Continuing Education hours toward the renewal of their licenses.

In addition to the pesticide handlers, 143 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 have been applied in the previous 30 days. Fourteen of the agricultural workers who attended this training received the information in English and 129 received the information in Spanish. The following chart shows the percentage of attendance in each type of training.



During this reporting cycle, ACT Pesticide Safety Program staff also presented two, 4-hour classes on pesticide safety and equipment calibration to 45 landscape professionals. The classes were presented at the Arizona Landscape Contractors' Association office in Scottsdale. The pesticide safety and calibration class is one of twelve courses offered annually through the Arizona Landscape Contractors' Association (ALCA). The series of courses focuses on important landscape topics such as plant identification, pruning techniques, irrigation and sod. Attendees take on-line exams following each course. After passing each of the twelve courses and exams, attendees become Arizona Certified Landscape Professionals.

Arizona Pesticide Safety Train-the-Trainer Workshops



Each year, staff in the Arizona Department of Agriculture's (ADA) Agricultural Consultation and Training Program work with industrial hygienists from ADA's Environmental Services Division to present pesticide safety train-the-trainer workshops.

The workshops, which are presented in English and Spanish, are 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 is included.

Train-the-Trainer workshop attendees plan their final presentation assignment.

Hands-on training techniques and group activities are used to demonstrate ways to extend pesticide safety information to pesticide handlers and fieldworkers.

Between July 1, 2013 and June 30, 2014, the team of instructors presented 13 workshops to 180 people in Yuma, Phoenix, and Pipe Springs, Arizona. In addition to attending the 6-hour course, attendees are required to provide a 5-minute safety presentation and pass a 50-question trainer exam before becoming a certified trainer. This year, 165 people completed and passed all three elements of the trainer requirements. They each received Arizona Pesticide Safety Trainer Certificates, which are valid for 3-years.

Pesticide Applicator Licensing Exam Events

In addition to presenting pesticide safety training programs, ACT staff administers private and commercial applicator licensing exams to large groups working outside the Phoenix area.

During FY14, ACT staff was invited to provide six pesticide applicator exam events in five locations. The events were held in Cottonwood, Tempe, Willcox, Pipe Springs (Kaibab-Paiute Tribe) and Gallup, New Mexico (Navajo Nation).

Many of the 95 test takers who participated in these events were state, federal and tribal government employees who planned to use pesticides in watershed restoration projects and invasive weed control programs within their communities. About half of the people who attended the event in Willcox worked on farms in Cochise and Graham counties.

Pesticide Safety Teaching Tools, Informational Resources, and Training Modules

ACT staff develops new and adapts existing teaching tools, informational resources, and training modules. These materials are used during safety events and are distributed to agricultural employers, employees, health care professionals, and outreach educators.

In Fall 2013, the ACT Pesticide Safety Program Coordinator designed two interactive Worker Protection Standard compliance modules.

The first module focused on pesticide application and emergency medical information that must be readily available to employees at an accessible central location. The second module addressed the Arizona pesticide safety training requirements and includes information on training recordkeeping, frequency of training, and trainer qualification. The modules were demonstrated to 195 people who attended the Arizona Department of Agriculture's Annual Recertification and Training Courses in Yuma, Safford and Maricopa.

The two modules are the first of a set of 10 that will be placed on the department's website to serve as on-line pesticide safety resources for the agricultural community.

The Application Log must contain the following information:

- 1.) Date of Application
- 2.) Product Name
- 3.) EPA Registration Number
- 4.) Name of the Active Ingredient
- 5.) The location and description of the Area Treated
- 6.) Time of application
- 7.) The length of the restricted entry interval
- 8.) The date and time that employees can re-enter the treated area

Information about each application must remain posted for 30 days after the end of the restricted entry interval. For examples of the length of time, click here [?](#)

The information must be easily accessible to all employees. For a definition of easily accessible, click here [?](#)

[Take me back](#)

ACT staff developed an interactive, on-line compliance module to describe the pesticide application and emergency medical information that must be available at a central location.

Air Quality Compliance Assistance

Regulated Agricultural Best Management Practices



The Regulated Agricultural Best Management Practices (RABMP) program has completed its tenth year of providing air quality compliance assistance to Arizona's agricultural community through a cooperative agreement with the Arizona Department of Environmental Quality (ADEQ). 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 projected growth is due to an increase in outreach for growers in the new West Pinal County Nonattainment Area.

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 regulations for agricultural dust in certain parts of Arizona require farms, nurseries, dairies/feed lots and irrigation districts to implement agricultural best management practices (BMPs) to help reduce 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.

This past year the Environmental Protection Agency (EPA) concurred with the ADEQ's exceptional events demonstrations. These demonstrations show the EPA that PM10 exceedances in Maricopa County were the result of natural or exceptional events that could not otherwise be controlled. With the concurrence, each of the monitors in the Maricopa County network will have had three or fewer PM10 exceedances for calendar years 2010, 2011 and 2012.

Subsequently, The EPA proposed to approve the 2012 Five Percent Plan for the Maricopa County Nonattainment Area because the plan shows annual reductions of PM10 emissions of at least 5% between 2007 and 2012 and demonstrates attainment by December 31, 2012.

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 scheduling 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.
- Combining tractor operations.
- Using drag equipment instead of push equipment to maintain pens.
- Using a water misting system that projects a cloud of very small water particles onto the manure surface.
- Reducing vehicle speeds on unpaved farm roads to 20 mph or less.
- Installing engine speed governors on feed trucks that limit speeds to 15 mph.



Combining Tractor Operations

Outreach and air quality education is provided to Arizona's agricultural community 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 2014 there were 132 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 2014 there were 18 trainings, presentations, and promotions of the program to agricultural workers and representatives. Outreach and training reached 2,151 participants.
- E-mail notifications of high wind advisories are sent 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 2014, 11 forecasts were sent to 280 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 2014, 1,117 copies of the newsletter were sent to 279 stakeholders in Maricopa, Yuma, and Pinal Counties.
- 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 2014, 12 articles and ads were published with a readership of 18,073 people.
- The air quality program worked with other agencies such as ADEQ and county farm bureaus to address compliance issues needing correction. These include public complaints, track-out issues, and violations. During fiscal year 2014, four issues were corrected.

During fiscal year 2014, the Governor's Ag Best Management Practices Committee and the Technical Workgroup was reconvened to address EPA's recommendations for the AgBMP Program and create a foundation for a program in Pinal County. The EPA felt that the BMP definitions 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. The Governor's Ag Best Management Practices Committee did suspend the March 31, 2014 reporting deadline for producers. Currently both the workgroup and committee are discussing with the EPA and ADEQ a program for Pinal County that will help bring Pinal County into attainment.

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 2014 outreach continued by 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' efforts to protect the environment through compliance assistance outreach and education; helps conserve the State's natural resources through Conservation Technical Assistance (CTA), and assists producers design and implement conservation practices with cost share assistance from Farm Bill Programs through NRCS.



CTA provides the technical capability, including direct conservation planning, design, and implementation assistance, to help farmers 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 was 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 ACEP Coordinator works directly with the NRCS Environmental Quality Incentives Program (EQIP) which provides voluntary conservation programs for farmers and ranchers to promote agricultural production and environmental quality. The resource concerns addressed with the 2014 EQIP applications include Air Quality, for both particulates and greenhouse gases; Soil Condition and/or Erosion; Water Quality and Quantity. EQIP offers financial and technical assistance for the installation and implementation of structural and management practices on eligible agricultural land. The ACEP Coordinator continued to assist the NRCS Avondale Field Office with project and status reviews, soil loss evaluations, cultural resource surveys, highly erodible land determinations and administrative management of EQIP applications and contracts for federal fiscal years 2010 to current.



Educational Outreach through the Multi-Agency CAFO Education Group

The ACEP Coordinator also meets compliance assistance goals through outreach opportunities which include Arizona's Concentrated Animal Feeding Operations (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 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 NRCD's, The University of Arizona Cooperative Extension, ADEQ and ADA. ACEP chairs the CAFO Education Group and facilitates meetings.



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

Further educational outreach provided by ACEP included 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 CAFO's. Other outreach is conducted by answering producer and consumer questions and providing information through letters, emails, faxes and phone calls. The total number of people reached through outreach and educational materials for fiscal year 2014 was 3711.

**Special Note: The federal funding for this program expired on August 31, 2014, just two months into the 2015 fiscal year.*

On-Farm Energy Audit Implementation Program

In March of 2013, the Arizona Department of Agriculture's (ADA) Agricultural Consultation and Training (ACT) renewed the contract with the USDA's Natural Resources Conservation Service (NRCS) to provide On-Farm Energy Audits at no cost to producers statewide. Energy has been a new concern with the cost of energy increasing. The first step in reducing energy costs is to have an audit completed to identify where to reduce energy use. Producers can cut their input costs, maintain production, protect natural resources and reduce dependence on fossil fuels 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 types of audits: Headquarter and Landscape. Headquarter Energy Audits consists of analyzing farm buildings, which includes lighting, insulation, ventilation, water systems, and heating that are used on dairies, feedlots, and greenhouses. Landscape Energy Audits consist of analyzing agronomic operations such as 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 2014 included:

- On-Site visits including a discussion of the program and its benefits, the steps involved in the auditing process, and what is expected from the producer. There were 104 visits to local producers to promote the program and its benefits.
- The program was promoted during various agricultural industry functions and meetings. Industry members include the local and State Farm Bureaus, Arizona Nursery Association, United Dairymen of Arizona, and local Natural Resources Conservation Districts. In fiscal year 2014 there were 23 promotional opportunities that reached 2,454 participants.
- Publication of various articles and ads in industry periodicals provided information on the program, its benefits, and how to apply. In fiscal year 2014, five articles and ads were published with a readership of 5,241 people.



The second feature 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 conducting the audits. EnSave is a NRCS certified Technical Service Provider (TSP) and follows the American Society of Agricultural and Biological Engineers (ASABE) Standards. ACT Staff performs data collection for the auditing company and gathers the needed information to complete the audit. Data includes information on motors, pumps, generators, compressors, lighting, ventilation, and irrigation systems on the property. This data is used in the process of analyzing the producer's 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. This training enabled ACT Staff to perform the onsite data collection for an energy audit, providing support for NRCS Agricultural Energy Management Plans, Rural Development REAP grant and loan applications, and other energy efficiency programs for producers.
- In fiscal year 2014 ACT Staff received 11 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 were reviewed and evaluated to determine whether the applicants would receive Headquarter or Landscape audits.
- Eleven applications were submitted to EnSave for audits to be completed in FY14. These included 7 applications for Headquarter Audits on concentrated animal feeding operations and greenhouses. Four applications were for Landscape Audits to be conducted on farms and ranches. Of the 11 applications, 3 were canceled upon review because facilities were already energy efficient and no recommendations could have been made.
- Nine qualified applicants from FY14 and nine qualified applicants from FY13 were carried over. Of these, twelve audits were completed. Six audits were Landscape Audits on farms and ranches, six were Headquarter Audits on dairies and greenhouses and six operations chose not to go forward. The final audit report includes information on current energy use, recommendations to increase the facilities' energy efficiency, and possible cost share programs available to help make the recommended energy efficiency upgrades.



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



The Agricultural Consultation and Training (ACT) Program of the Arizona Department of Agriculture (ADA) through a United States Department of Agriculture – Agricultural Marketing Service (USDA-AMS), Specialty Crop Block Grant Program grant, has entered into a cooperative agreement with The University of Arizona Cooperative Extension to develop and make available a course for workshop training. This is the third 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 to restaurants and other wholesale accounts. Good Handling Practices (GHP) refers to post-harvest operations, while Good Agriculture Practices (GAP) refers to on-farm operations and systems.

This training is 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 voluntary program of the USDA-AMS, requires growers, processors, and those transporting these products, to increase their awareness of food safety hazards, to mitigate these hazards, and to monitor and document their actions.

Certification by the USDA, ADA or a third party may be required by the buyers or markets for growers to sell their produce. This certification assures the buyers that the growers have protocols and procedures in place to minimize food safety risks. The GAP and GHP audits focus on best agricultural practices to verify that fruits and vegetables are produced, packed, handled, and stored in the safest manner possible to minimize risks of microbial food safety hazards.

Dr. Kurt Nolte, a University of Arizona Cooperative Extension Agent researching lettuce production in Yuma, has developed two half-day training sessions which were taken to various agricultural locations around the state. These workshops have been presented to nearly 400 individuals in different areas of the state including Yuma, Tucson, Phoenix, Flagstaff, Casa Grande, Willcox, Nogales, Bullhead City, Snowflake, Cottonwood, and Prescott. Attending growers have been diversified as to their experiences, farm sizes and crops. Producers of lettuce, apples, pistachios, tomatoes, chili, dried beans, as well as greenhouse vegetable operators and other growers have attended these workshops. Warehousing, storage and transportation operation representatives 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 anti-bacterial 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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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 Components 1 and 2. The warehouses may only want certification in Components 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 or for training materials, which includes monitoring logs and forms. ADA will offset the cost of the audit with a cost share/grant up to 75% of the cost of the audit, to a maximum of \$750.00.

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 for 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, goes 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, the Citrus, Fruit & Vegetable Standardization Division,

Dr. Nolte, and the USDA Certified 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: _____ <u>They want certification in Sections 1, 2, 3, 4, 6, 7.</u> This is a hydroponic operation, totally enclosed within a warehouse. Produce will include tomatoes, peppers, cucumbers, mushrooms, microgreens. <u>GENERAL QUESTIONS</u> 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
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Once the grower or facility operator is confident they can pass the audit, they are able to contact the ADA Auditor to visit their location and administer the audit. Each question of each section is weighted for points, and a minimum score of 80% is required for certification. Questions not pertaining to the operation are removed and scoring is adjusted accordingly. 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 and the operation will be entered into the AMS on-line database 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 was completed in fiscal year 2013. This grant cycle utilized unspent grant funds from all previous grant cycles.

Discussions are ongoing with several state and federal agencies working together on a large scale geographical conservation project that would utilize additional unspent grant funds from all previous grant cycles. This project is scheduled to take place in late FY 2015.

During fiscal year 2014, 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 Natural Resources Conservation Service (NRCS) Environmental Quality Incentives Program (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 Coordinators continue to administer the existing grant contracts from all previous grant cycles. Throughout the duration of the grant project, the LCCGP Coordinators provide administrative support and information, answer questions and concerns and assist the grantees with reimbursement and funding advance requests. At the close of FY14, 56 of the 56 grantees from the fiscal year 2005 cycle, 66 of the 70 grantees from the fiscal year 2007 cycle, 57 of the 63 grantees from the fiscal year 2009 cycle, 33 of the 43

grantees from the fiscal year 2011 cycle and 12 of the 13 grantees from the fiscal year 2013 cycle had completed their proposed grant projects. Additionally, throughout fiscal year 2014, more than \$468,000 was disbursed to grantees to work on their contracted projects.

LCCGP Coordinators 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. The Agricultural Act of 2014 continues funding for the program through 2018. The 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 2014, Arizona’s State Plan was approved by the U.S. Department of Agriculture’s Agricultural Marketing Service (AMS), and a cooperative agreement, which provided \$1,318,053.18 in grant funds to the ADA, was executed on September 24, 2014. The SCBGP-FB Program Coordinators worked with sub-grantees to execute grant award agreements, and provide guidance and assistance with quarterly reports and quarterly reimbursements.

On April 17, 2014, AMS announced the availability of \$66 million in federal fiscal year 2014 funding. The funding is authorized by the Agricultural Act of 2014 (Farm Bill). Each state department of agriculture is eligible to receive a base grant of approximately \$221,000.00. In addition, AMS allocated the remainder of the grant funds based on the proportion of the value and acreage of **specialty** crop production in the state. The 2014 base grant amount plus the AMS assigned value of specialty crop production for Arizona is \$1,100,428.11. The SCBGP-FB Program Manager submitted the Arizona State Plan to AMS on July 9, 2014.

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 1.8 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 2014 Financial Status - Arizona Citrus Research Council

Revenue	\$28,175.28
Expenses	\$23,335.60

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 produced approximately 23 million cartons of iceberg lettuce in FY 2013. 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 2014, the Council continued to support research projects by granting over \$78,000 to the University of Arizona. Some examples of research grant projects include evaluation of new insecticides, assessing irrigation water contamination risks and effective management of powdery mildew.

Fiscal Year 2014 Financial Status-Arizona Iceberg Lettuce Research Council

Revenue	\$97,606.74
Expenses	\$88,172.25

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 sensor-based management of Nitrogen on irrigated durum wheat in Arizona, reducing Cadmium accumulation in Durum wheat grown in Arizona, determination of optimal planting configuration of low input and organic barley and wheat production. Annually, the council funds the small grain variety test trials used by producers to evaluate the varieties available. More than \$48,000 was spent on research projects during fiscal year 2014.

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® crop in Arizona and Southern California and publishes the results for buyers around the world.



Fiscal Year 2014 Financial Status - Arizona Grain Research and Promotion Council

Revenue	\$180,366.19
Expenses	\$118,420.24

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.

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 th 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.

This year marking the first laboratory audit by the United States Department of Agriculture (USDA) of the laboratory's meat pathogen testing program. This year's audit is the next step in forcing all state laboratories to become accredited to the ISO 17025 standard.

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. This year the laboratory began participating in a new PTP for pathogenic organisms in meat products. This was begun in response to increased QA requirements from the USDA for its cooperative programs with the States.

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.

Staff Allocations

The Environmental Services Division had 19.5 full-time employee positions as of June 30, 2014 which was no change from 2013. 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 completed 2 major projects this past year. First, the Pesticide Registration database was re-written to accept online renewal of registrations. This was successful in that there were no issues in payment or records processing, and of the 12,656 registered pesticide products, 2,354 (18.5%) were registered online from 290 different companies, generating a revenue total of \$277,700, or 21.5% of total Pesticide revenue. The other program that was addressed is the Credentials program, which tracks license holders that are in some way related to pesticide application, whether that be a grower, seller, pilot, or applicator. In the coming renewal season this fall, we anticipate online renewals for Credentials to be at least as successful as the Pesticide Registration was this past season.

The Agency web site has been migrated to the Drupal platform in compliance with ADOA directives, to conform to statewide standards and the domain name has also been updated to agriculture.az.gov, also to comply with standards. The migration was a success, and the new site design has been very well received by the public. Certain functions of the site remain in-house due to the database-intensive queries that retrieve license holder information, which cannot be migrated for privacy and data security concerns.

Work is in progress for a new application in support of the Dairy program in the Animal Services Division that will allow compliance with USDA in reporting and documentation of Dairy products processing facilities and dairy farms. This project is near completion, and will provide detailed reporting for the various facilities and farms for everything from inspection documentation to lab sample test results.

During the past year, the IT Department responded to 369 reported user issues, solving 99.2% those within 4 hours. There were no unscheduled major outages to network services.

The Agency mail server delivered over 950,000 separate mail items successfully, both inbound and outbound, and blocked more than 235,000 messages containing malware or virus infections.

Lastly, the Agency maintained a 99.68% uptime reliability for all server based systems for the past year. This is attributed to the continued updating of server hardware, and ongoing funding for this is essential in order to provide reliable electronic communications to both Agency employees and the citizens of Arizona.

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. The best way to get needed forms for licensure application is to access our home page at <https://agriculture.az.gov/forms-library>.

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 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; a \$100 per product pesticide registration; and, an annual seed license fee of \$50 for dealers and \$100 for labelers. Approximately one-half of the money collected for seed licensing is used for 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 2014, \$967,476 in fees was collected for the WQARF: \$60,735 in fertilizer fees and \$906,741 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.

CONTINUING EDUCATION APPLICATIONS

ADA APPLICATIONS RECEIVED FY 2014	TOTAL APPROVED	DENIED
416	401	15

During FY 2014 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 839.5 hours.

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 520-770-3035 or 520-770-3036 (Tucson).

Exams Administered in FY 2014

TYPE OF EXAM	Total Exams	Number Passed	Number Failed	Passing Rate
Aerial Applicator (AAP)	1	1	0	100%
Commercial Applicator (PUC)	213	182	31	85%
Custom Applicator (CAA)	1	1	0	100%
Pest Control Advisor (PCA)	36	22	14	61%
Private Applicator (PUP)	145	103	42	71%
Fumigant Endorsement	12	3	9	25%
Milk Sampler & Hauler	89	67	22	75%
Cottonseed Sampler	0	0	0	N/A
TOTALS	497	379	118	76.2%

The following chart represents the total number of licenses, permits and certificates issued by the Licensing Section during FY 2014:

Licenses and Registrations Issued in FY 2014	
Pesticide - Total Pesticides Registered	12638
Agriculture Use Pesticides	1379
Non-Agricultural Use Pesticides	10356
Fertilizer - Licensed Fertilizer Companies	409
Specialty Fertilizers	3,184
Feed - Licensed Feed Companies	627
Seed Dealers	1,241
Seed Labelers	173
Dairy/Milk Industry Licenses	364
Aquaculture Licenses	66
Egg & Egg Products	119
Meat Industry Licenses	235
Livestock Brand Certificates	1,696
Equine Certificates Issued	69
Equine Rescue Facilities Registered	20

Certificates of Free Sale	203
Products Certified for Free Sale	2,943
Native Plant Permits Issued	1,045
Number of Native Plants Permitted	55,758
WPS-Worker Cards Issued	16,126
WPS-Handler Cards Issued	6,622
WPS-Trainers Certified	168

The end of the calendar year is very busy in licensing. The following chart represents the total number of pesticide use related licenses issued during the 2014 fiscal year all which expire at year's end. Other licenses that expire on December 31 are aquaculture, meat, dairy and pesticides. Additionally, feed and fertilizer tonnage reports for the fourth quarter are due at year's end.

Pesticide Use Related Credential Summary FY 2014	
Grower Permits (PGP)	1306
Pesticide Sellers (PSP)	137
Ag Aircraft Pilots (AAP)	43
Custom Applicators (CAA)	49
Equipment Tags	192
Pest Control Advisors (PCA)	209
Private Applicators (PUP)	468
Commercial Applicators (PUC)	370
Golf Course Applicators (PUG)	366
Pesticide Responsible Individual (PRI)	20

<i>Fertilizer Tonnage FY 2014 (in Tons)</i>			
Dry	Bulk	Liquid	Total
53,950.82	98,380.18	161,885.96	314,216.96
<i>Feed Tonnage FY 2014 (in Tons)</i>			
<i>Total 1,375, 507</i>			

Compliance

Pesticide Compliance and Worker Safety Program

These field staff conducts 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. 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. These inspectors also are responsible for the Non-Food Quality Assurance program inspections.

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. No recommended disposition dealing with a third party complaint can take place without a review and approval by the Associate Director, the Director and by law 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 concerns have been previously raised regarding applications.

Restricted Use Pesticides

Anything that makes a claim to control, mitigate, repel, kill etc. a pest is a 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. 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 an ongoing 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 Arizona'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 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 four 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 Phoenix, Yuma, and Pipe Spring. In addition to these workshops, ESD Compliance Industrial Hygienists also presented five, 4-hour refresher courses for current pesticide safety trainers in Phoenix, and Yuma.

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 14, Yuma, November 19, Safford or November 21, Maricopa. Courses covered pollinator protection, private applicator fumigation use and numerous other topics.

Groundwater Protection

Close cooperation between the Arizona Department of Agriculture and the Arizona Department of Environmental Quality continued. Over 1600 analyses were performed on samples from 16 different monitoring wells for the active ingredients on the state's groundwater protection list and pesticides of interest list for the EPA. The state ag laboratory does the analysis. The funding for the analysis has been provided by the US EPA through the agencies cooperative agreement. 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.

Community / Industry Outreach Activities

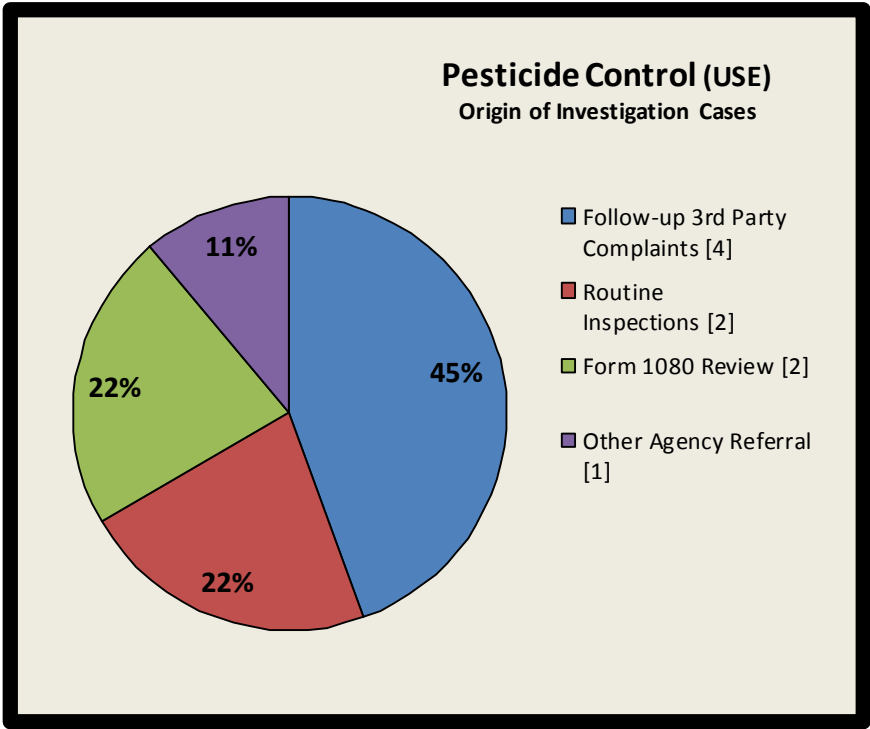
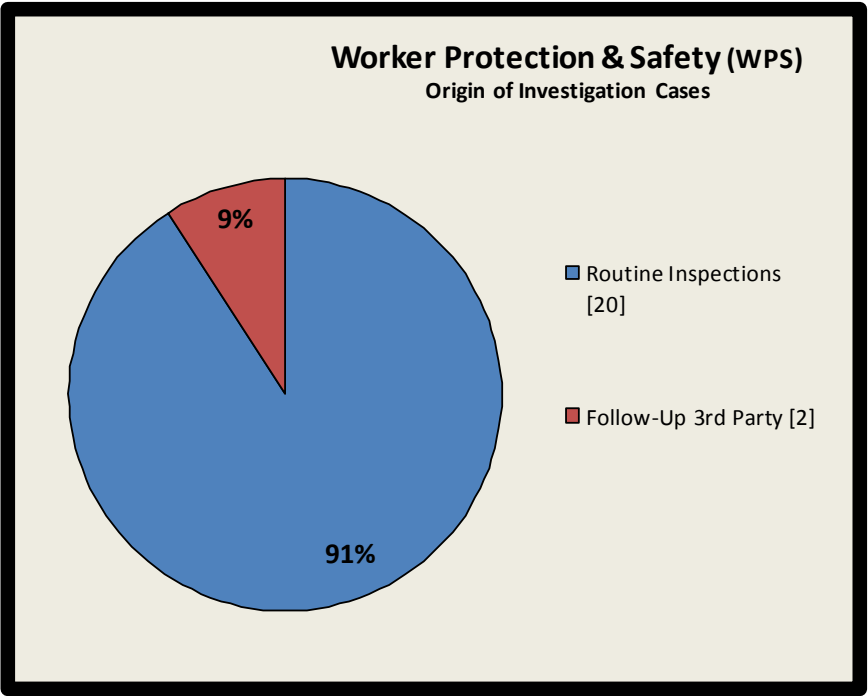
ESD Compliance inspection staff participated in community / industry outreach activities in Yuma, San Luis and Willcox Arizona.

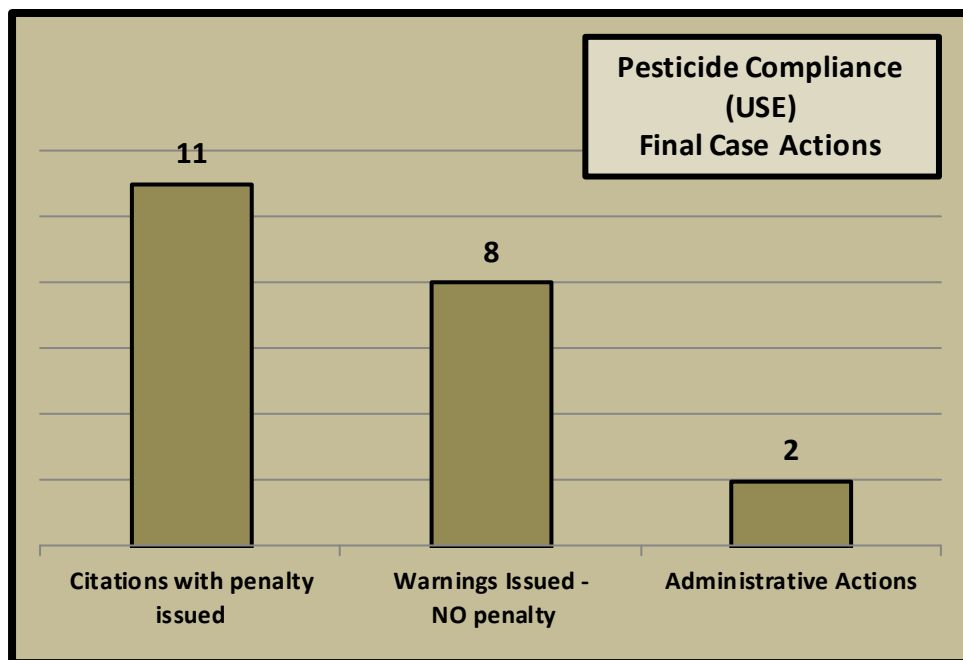
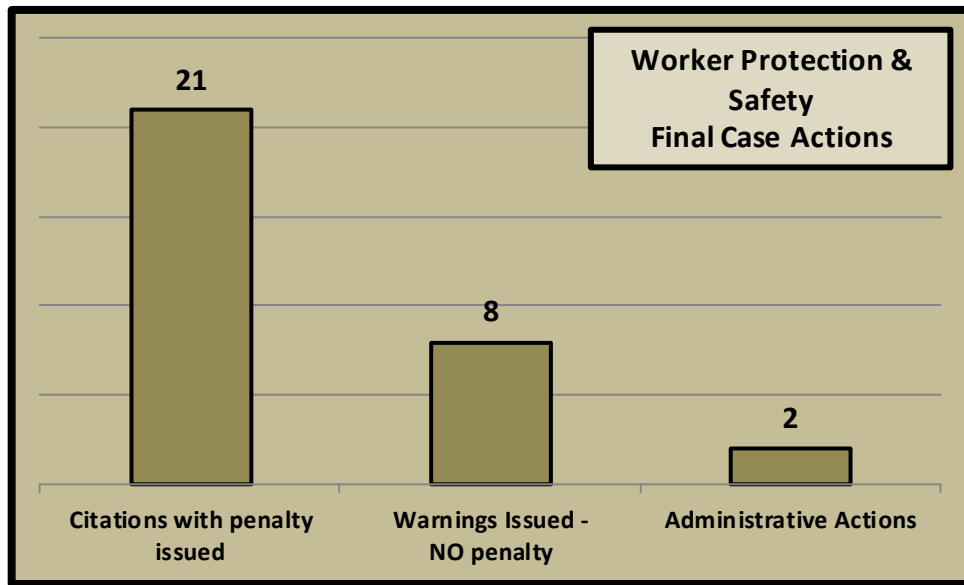
- Dia Del Campesino Health and Information Fair – San Luis, AZ
- Willcox Ag Days – Willcox, AZ
- 2013 Annual Irrigation Workers Safety Meeting – Yuma, AZ
- Rain for Rent Worker Safety Training – Yuma, AZ

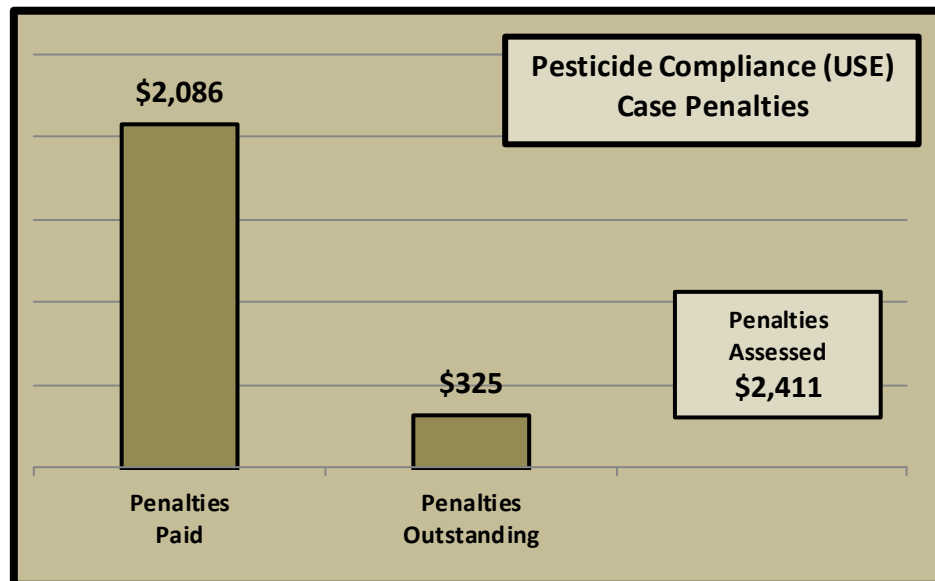
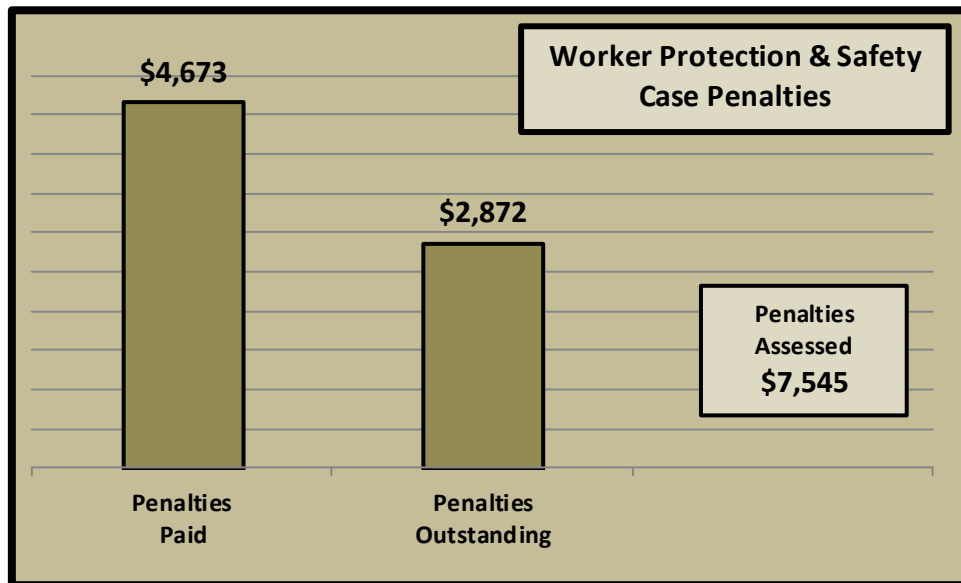
Training /Conference Attendance

ESD Compliance staff attended training/conferences as follows:

- Pesticide Program Management for New Supervisors / Managers – Sacramento, CA
- NCIT CLEAR Specialized Investigator Training – St. Louis, MO
- 2014 Desert Ag Conference – Chandler, AZ
- AAPFCO 26th Fertilizer Administrators' Seminar – Boise, ID
- STAA Annual Convention – Tubac, AZ
- New Technologies for Arizona Field Crops, Maricopa, AZ







Pesticide USE & Worker Safety Violations Observed

Pesticide Control (USE) Violations	Number of Violations
Label Violation	8
Drift / Overspray	5
Expired License	3
Illegal Sales	3
Record Keeping	3
Failure to Train	3
Container Disposal / Storage	3
Medical Emergency Information Not Posted / Missing / Incomplete	2
Operating without a valid license	2
Unregistered Pesticide	1
Application List Not Provided / Posted / Incomplete	1
Central Posting – Missing / Incomplete / Inaccessible	1
Personal Safety Equipment Not Provided	1
Violation of Restricted Entry Interval	1
Failure to Verify Training	1
Safety Poster Not Posted / Illegible / Inaccessible	1
Decontamination Site / Supplies Not Provided	1

Worker Safety Violations	Number of Violations
Failure to Train	18
Failure to Verify Training	11
Central Posting – Missing / Incomplete - Inaccessible	11
Application List Not Provided / Posted / Incomplete	8
Medical Emergency Information not Posted / Missing / Incomplete	4
No Warning Signs Posted / Signs Not Removed	1
Violation of Restricted Entry Interval	1
Decontamination Site / Supplies Not Provided	1
Safety Poster not Posted / Illegible / Inaccessible	1
TRAINER – Expired Certification or No Certification	1
Label Violation – Storage / Disposal / Transport / General Misuse	1
Unsafe Environment	1
Container Disposal / Storage	1
Record Keeping	1

Non-Food Quality Assurance

Marketplace Inspections and Sampling

<i>Sample Analysis for 2013 / 2014 SFY</i>		
Sample Type	Collected	Analyzed
Feed	96	200
Fertilizer	85	199
Water	0	51
Pesticide Formulation	81	81
Pesticide Residue	78	325
Seed	100	469

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.

Samples can have numerous analyses.

Bovine Spongiform Encephalopathy Inspections (Mad Cow Disease)

The division, working under a cooperative agreement with the Food and Drug Administration (FDA), conducted 35 inspections of feed manufacturers, dairies, feed yards, trucking companies and dealers to ensure compliance with federal regulations regarding animal feed ingredients fed to ruminants and their potential for human health and safety concerns.

Non-Food Quality Enforcement Actions

FERTILIZER	Number
TOTAL NUMBER OF CASES OPENED	8
Routine Inspections	7
Follow-Up 3 rd Party	1
NUMBER OF FERTILIZER PENALTIES ISSUED	2
Total amount of penalties issued	\$402.45
Total amount of outstanding penalties	\$402.45
CEASE & DESIST ORDERS ISSUED	9
Unregistered Specialty Fertilizer	5
Quality Assurance Analysis Failures	3
Unlicensed Commercial Fertilizer Company	1
WARNINGS ISSUED	8
Unregistered Specialty Fertilizer	4
Quality Assurance Analysis Failures	3
Unlicensed Commercial Fertilizer Company	1

COMMERCIAL FEED	Number
TOTAL NUMBER OF CASES OPENED	23
Routine Inspections	23
CEASE & DESIST ORDERS ISSUED	30
Unlicensed Commercial Feed Company	23
Quality Assurance analysis Failures	6
Misbranding – not labeled as required	1
WARNINGS ISSUED	27
Unlicensed Commercial Feed Company	23
Quality Assurance Analysis Failures	3
Misbranding – not labeled as required	1

Non-Food Quality Enforcement Actions

SEED	Number
TOTAL NUMBER OF CASES OPENED	4
Routine Inspections	3
Follow-Up 3 rd Party	1
CEASE & DESIST ORDERS ISSUED	3
Expired Test Date	2
Unlicensed Seed Dealer	1
WARNINGS ISSUED	2
Unlicensed Seed Labeler	1
Expired Test Date	1

PESTICIDE	Number
TOTAL NUMBER OF CASES OPENED	15
Routine Inspections	7
Follow-up third-party complaints	5
Division Generated	2
Form 1080 Review	1
CEASE & DESIST ORDERS ISSUED	7
State Unregistered Pesticides	5
Misbranding – False Misleading Labeling	2
WARNINGS ISSUED	6
State Unregistered Pesticides	5
Misbranding	1

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: **49**

Warnings / Notice of Violations Issued: **43**

Country of Origin Labeling (COOL)

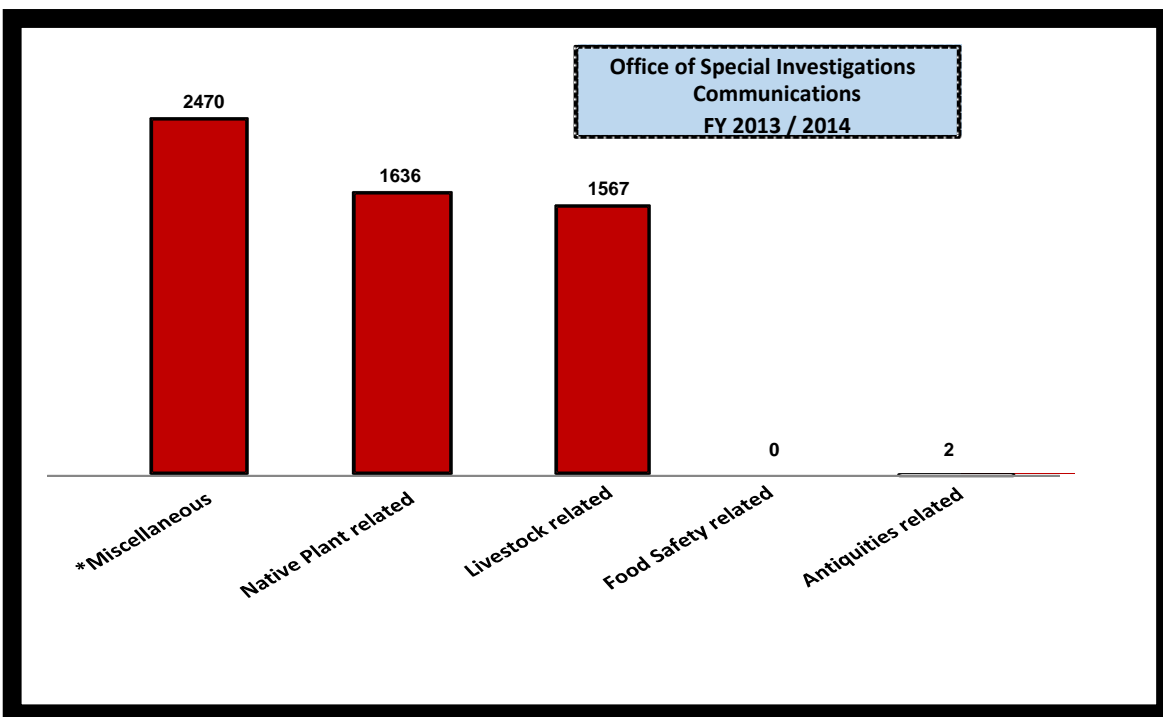
For the fifth year, the division worked under a federal cooperative agreement with USDA Agricultural Marketing Service and hired a part-time inspector to conduct inspections under the program. Inspections

are conducted at assigned 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. The changes to the COOL regulations this year were that for muscle cuts of meat it must include where the meat was born, raised and processed. However, concerns still exist for labeling the muscle cuts with international trading partners.

Office of Special Investigations

The Office of Special Investigations' (OSI) primary responsibility is performing detailed 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. The bulk of the calls, e-mails, letters or walk-ins is for information and/or assistance. OSI responded to 5,675 telephone calls, e-mails, letters and visitors in the Phoenix and Tucson offices: 1,636 dealt with native plant issues, 1,567 were livestock related, 2 antiquities inquiries and 2,470 communications related to other issues, i.e. training, public relations, agency assists both inner-office and external.



Officer Certification, Training & Meetings

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

All full time peace officers with the department are required to complete the minimum requirements prior to the end of the calendar year except those employees who were in a certified academy during the calendar year, their certification requirements begin in January of the year following their graduation. Due to numerous scheduling conflicts, sick leave and staff reassignments there were several officers that did not get their required training completed within the calendar year but were able to complete it within 90 days of the close of the calendar year which brought all officers into compliance. Allowances are made for just these types of circumstances.

AZPOST no longer reviews the files within the agency but instead the agency training coordinator is required to supply AZPOST compliance division with confirmation of training for those officers requested by AZPOST on a form provided by AZPOST. After the AZPOST compliance staff review the forms a letter is sent to the training coordinator confirming that ADA officers are 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 utilizing a minimum of three discriminatory scenarios. The chart below reflects the actual continuing education hours for the year for each officer along with the dates of qualifications in proficiency and firearms and a check to insure there is compliance.

CERTIFIED OFFICER TRAINING STATUS ~ CY 2013					
<i>Arizona Department of Agriculture</i>					
<i>Updated: 3/25/2014 – Austin – OSI – ADA - AZPOST Training Coordinator</i>					
Officers	Total Continuing Education Hours	Proficiency Training Performed	Firearms Qualification Performed	Judgmental Qualification Performed	compliance
* denotes specialty officer	AZPOST requirement : 8 hours annually	AZPOST requirement: 8 hours every three years / due in 2014	Minimum: AZPOST approved daytime qual. Course: annually	AZPOST Minimum: three discriminatory scenarios	AZPOST minimum standards completed
K. Austin	15	Passed 2010	11/7/2013	1/7/2014	✓
T. Chacon	14	Passed 2010	11/7/2013	3/25/2014	✓
R. Christensen	11	Passed 2010	11/7/2013	11/7/2013	✓
D. Drake	16	Passed 2010	12/18/2013	1/7/2014	✓
D. Hale	33	Passed 2010	11/7/2013	11/7/2013	✓
J. Pepper	80	New hire	9/18/2013	11/20/2013	✓
R. Porter	8.5	Passed 2010	11/7/2013	1/2/2014	✓
*M. Reimer	23	Passed 2010	11/7/2013	1/23/2014	✓

T. Schultz	19	Passed 2010	2/12/2014	2/12/2014	✓
J. Servis	28	Passed 2010	11/7/2013	11/7/2013	✓
Officer Certification Records for 2013 were sent to AZPOST on: 03/25/2014 and were found to be in compliance.					

In calendar 2013 9 out of the 10 officers with the agency completed rifle qualification and 7 out of 10 completed shotgun qualification. Rifle and shotgun qualification is not required by AZPOST for officer certification. If the agency approves the carry of such firearms officers must pass a qualification course approved by AZPOST.



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.

This year WSLIA was approved for 12 hours of AZPOST credit. ASD sent one sergeant and two officers to the conference and the expenses were covered by the \$2198.00 received from AZPOST to help pay travel expenses



Banquet at the conclusion of the conference, Sgt. Raymon Christensen, Officer Randy Porter and Officer JD Pepper from ADA-ASD in the foreground.

The continuing training given at the conference was a 4 hour session on how to read body language by world renown Lou Tessman; 2 hours of training on search and seizure by Idaho Superior Court Judge Tom Watkins and former Idaho Owyhee County Prosecutor and now defense Attorney Scott James; 1 hour of training on commercial vehicle stops presented by Captain Reese of the Idaho State Police; a 3 hour session on investigative tools and internet in oil field theft that can be used for any type of theft presented by Gary

Henderson of Devon Energy and lastly a 2 hour session on case preparation presented by our agency's Special Investigations Supervisor, Kevin 'Zeke' Austin.

In July OSI's Supervisor attended the 67th Annual meeting of the International Livestock Identification Association (ILIA) in Lake Tahoe, Nevada. Arizona is a charter founder of this organization and has maintained continuous membership. The group was originally organized as the International Brands Committee and Arizona has had several past presidents. The emphasis of the organization is animal identification and inspection. The department continues to have a voice in animal identification with this organization by continuing to support attendance and the program.



The ILIA is a strong supporter of brands as a legitimate form of identification and encourages legislation that provides for laws regarding inspection 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, and throughout the western United States and Canada.

That said, the mandatory individual animal identification in Canada and now the ADT (Animal Disease Traceability) program in the United States has prompted animal industry supporters in the technology field to design and develop numerous RFID (radio frequency identification) devices, primarily ear tags, that can be read using several different devices that scan or 'pick up' RFID tag placed in an animal's ear.

The ILIA conference 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. Arizona continues to be the least expensive for the individuals seeking the inspections to be performed.

The livestock industry is a critical industry in North America and generates an enormous impact both in job creation and revenue generation. The North American livestock industry is also critical in supplying safe food to over 475,000,000 people in the United States, Canada and Mexico.



The dues paid to this organization help provide funds to continue a 22 state 4 province network that we can reach out to electronically on livestock theft alerts. (All Points Bulletin) 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 so that the member organizations can get it out to their inspection and investigation personnel quickly.

This information is delivered by a member agency to the Colorado Brand Board which then distributes it out electronically to all members.

Young feeder cattle in a feedlot in Texas.

The ILIA conference has always provided a wide array of speakers that range from agriculture statisticians and forward thinking agri-business reps to investigators with up to the minute information on animal rights activists and environmental activists.

This year there was an exceptional presentation by Emily Meredith, the Director of Communications with the Animal Agriculture Alliance. The Animal Agriculture Alliance has been engaged in monitoring the animal rights movement for 26 years! The Alliance works to engage proactively in the same space that the groups use to detract us from the real truth and works diligently to correct misinformation about livestock production and build meaningful relationships with agriculture's true stakeholders, the consumers.

There was an informational session presented by representatives from the Hartford Insurance Livestock Department regarding insurance claims side of livestock transportation accidents and they provided many answers to questions from the audience.

Similar to what ILIA had last year, there was a panel discussion on the ADT (Animal Disease Traceability) rule and animal health discussion. This year State Veterinarians were invited to sit in on the discussion along with the industry representatives and APHIS representatives.

Enforcement Activity

There were 43 cases of alleged criminal/civil violations opened involving native plants, of which 36 are alleged criminal violations. There were 27 native plant cases that resulted in successful compliance. The number of criminal referrals was up 19 percent and the number of civil referrals was up 38 percent 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, Land Department and County Sheriff's offices on several native plant cases.

This past fiscal year there were no livestock investigation referrals from the Animal Services Division. There were 15 requests for an APB (All Points Bulletin) which is for lost, strayed or stolen livestock. The chart below shows the categories of livestock and their respective numbers. Of the 173 reported only 5 animals were recovered: 1 bull, 1 heifer and 3 horses.

ALL POINTS BULLETINS (APB) FY 2013/2014									
<i>Reported lost, strayed or stolen Livestock</i>									
Horses		Cattle					Other		Total
Gelding/stud	Mare	cow	Bull	Steer	Heifer	Calf	goat	sheep	
3	1	92	5	1	5	62	4	0	173

In the Native plant arena there was one case spotlighted in FY 2013/2014 involving the City of Scottsdale's failure to file an Intent to Clear Land which resulted in the City paying a \$3000.00 civil penalty.

The State of Arizona Native Plant Program takes the destruction of protected native plants serious as do the constituents and as a result of some observant Scottsdale residents OSI was able to perform an investigation which led to the payment of the fine by the City of Scottsdale.



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 the person or business entity stated thereon.

It is illegal in Arizona to destroy or dig up any protected native 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.

We continually work closely with other agencies due to the fact that we have limited personnel to continually be out in the field. The photograph at right was provided to OSI by a USDA forest service employee that believed this could be illegal.



This is an illegal taking of a protected native plant that resulted in a guilty plea by the person responsible.

There were twenty-one cases of native plant theft opened in FY 2013/0214 of which two were closed as unfounded. Fifteen were completed and the cases closed due to the factual evidence that demonstrated the persons accused were in compliance with the law. There are currently three open cases which are being investigated.

An unfortunate trend OSI is seeing in native plant investigations is an increasing number of native plant destruction by both state agencies and private property owners failing to file the required notice of intent to clear land of protected native plants prior to construction. Three of ten cases were state agencies, one was closed as unfounded, one has been concluded and we are awaiting a reply from the agency and the last is still under investigation.

The other seven were private property owners. Three were closed as unfounded; one citation issued and a fine paid, the other three warnings were issued. OSI also opened five cases of misuse of permits and tags. Four cases were closed as unfounded, one is still under investigation.

Lastly, the OSI office in Tucson responded to numerous requests for reviews of pending large construction projects by state, federal and municipal agencies such as the Arizona State Land Department, Military bases and the Arizona Department of Transportation. The office responded in writing to 181 such request in FY 2013/2014 which is slightly down from last year.

OSI Administrative Statistics

NATIVE PLANT PERMITS AND TAGS						
FY 14-QUARTERLY REPORT-TUCSON OFFICE						
Month Issued	No. of Permits	Saguaro Tags	Regular Tags	Green Seals	TOTAL	
August	25	90	107	1,390	\$	1,376.50
September	37	419	747	520	\$	6,857.00
October	34	163	204	1,845	\$	2,402.25
November	19	23	1012	1,102	\$	3,174.30
December	23	176	355	780	\$	2,182.00
January	33	283	298	100	\$	3,073.00
February	37	251	1686	1550	\$	4,233.00
March	45	672	1,099	1615	\$	10,062.25
April	32	218	322	2671	\$	2,954.65
May	30	428	302	2860	\$	4,913.00
June	16	218	143	1485	\$	2,258.25
TOTAL	331	2,941	6,275	15,918	\$	43,486.20

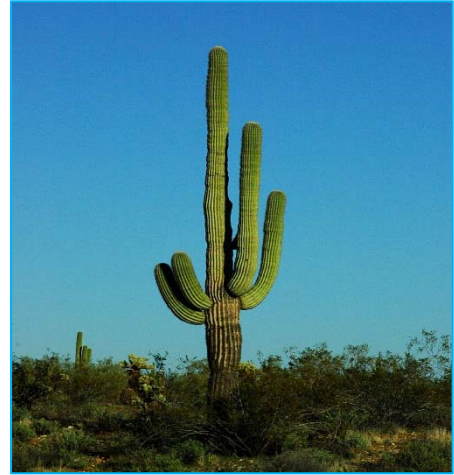
Number of permits, tags and seals issued and revenue received from the Tucson office for FY 2013/2014

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 performs 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.

The trend is relatively steady for the past two years in permit and tag sales with some improvement over the last five years. The growth in sales is slow reflecting the slow but steady gain in the economy.

One final note on OSI. There are only two Office of Special Investigations officers, but without their efforts and presence in and out of the State the protected native plants that everyone around the world enjoys seeing would be limited in number and dwindling rapidly without a strong program. OSI takes native plant theft and destruction very serious and strives daily to keep them from being stolen and/or damaged or destroyed illegally. There is nothing more majestic on any place on this planet than a saguaro cactus.



Office of Pest Management

Staff Allocations

The OPM has allocated 30 full-time employee positions with 17 of them being filled as of June 30, 2014. Six of these positions are in the field and are responsible for all the inspections and complaint follow-up.

Licensing

License or Registration	Received/ Processed	Newly Issued	Overall Issued	Did not follow through by end of FY2014	No. of Licensees end of FY2014
Certified Applicator	8052	919	8040	12	6251
Qualified Applicator	1868	130	1865	3	1455
Business	1284	100	1279	5	1170
Branch Office	92	10	92	0	92

The Office of Pest Management (OPM) has an internet based license renewal system – RenewEZ; which processed 80% of all renewals received in FY2014. All certifications and licenses expired on May 31st.

OPM Testing

To show competency in the application of pesticides, an applicant must be certified. To be certified an applicant must score at least a 75% on their respective certification exams. A new applicant must pass the Core and at least one Category-Specific exam. To broaden an existing certification, an applicator must pass the category-specific exam that they applied for. Since July of 2003, through an RFP process, the OPM's exams have been administered by Metro Institute, Inc. (Metro), an independent testing vendor, by way of a computer-based testing system. Certified Applicator and Qualified Applicator applicants submit their application to the OPM. Upon approval of the application, the OPM transfers the applicant's information and the categories the applicant is eligible to take to Metro. Metro has test centers in Phoenix, Glendale, Tucson, Flagstaff, Prescott, Kingman, and Yuma.

The following table shows the total number of exams administered over the last 11 fiscal years.

Fiscal Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
No. of Exams Administered	5,067	5,825	8,585	7,732	7,145	4,833	4,467	4,111	4,284	5,390	4,265

OPM Exams Administered in FY 2014

License Type	Exams	Total Exams	Percent Passed	Average Passing Score	Average Failing Score	Average Attempts
Certified Applicator	Core	1020	64.0%	82.4%	65.6%	1.2
Certified Applicator	National Core	385	49.9%	80.8%	66.5%	1.3
Certified Applicator	Aquatics	32	59.4%	83.3%	59.6%	1.2
Certified Applicator	Fumigation	17	41.2%	79.1%	59.4%	1.7
Certified Applicator	Industrial & Institutional	935	51.9%	80.7%	67.0%	1.5
Certified Applicator	Ornamental & Turf	406	44.6%	81.8%	63.9%	1.4
Certified Applicator	Right-of-Way	432	43.5%	81.1%	62.5%	1.4
Certified Applicator	Wood-Destroying Organism Mgmt.	476	44.1%	80.1%	65.6%	1.6
Certified Applicator	Wood-Destroying Insect Inspection	33	39.4%	79.4%	62.9%	1.3
Certified Applicator	Wood Preservation	9	11.1%	80.8%	66.6%	3
Qualified Applicator	Core	112	44.6%	80.1%	65.5%	1.4
Qualified Applicator	National Core	36	88.9%	83.3%	69.8%	1.0
Qualified Applicator	Aquatics	5	60.0%	79.7%	46.0%	1.3
Qualified Applicator	Fumigation	8	37.5%	78.5%	59.2%	1.3
Qualified Applicator	Industrial & Institutional	105	62.9%	80.7%	66.4%	1.3
Qualified Applicator	Ornamental & Turf	75	69.3%	82.3%	66.3%	1.2
Qualified Applicator	Right-of-Way	50	66.0%	80.4%	66.6%	1.3
Qualified Applicator	Wood-Destroying Organism Mgmt.	102	45.1%	79.9%	65.7%	1.6
Qualified Applicator	Wood-Destroying Insect Inspection	8	37.5%	80.0%	57.6%	1
Qualified Applicator	Wood Preservation	5	20.0%	77.3%	60.2%	2.0
TOTALS		4,265	50.8%	71.9%	80.5%	1.4

The average number of attempts is greater than one, which shows that some 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.

CONTINUING EDUCATION APPLICATIONS

OPM FY 2014 Applications Received	FY 2014 Courses Approved	Denied
684	664	20

During FY 2014 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 839.5 hours.

OPM Compliance

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.

The Office's six compliance inspectors performed 1,295 pesticide use inspections which encompass all categories for which the Office issues licenses (general pest, wood destroying treatment, et. al), and in many different settings, including residential, food-handling, schools, childcare facilities, golf courses, and health care facilities.

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. Is the site on the label, was the concentrate mixed according to label directions? Was the correct amount applied to the area treated? etc...). OPM compliance staff conducted 1,052 non-use inspections, noting 182 violations in FY2014.

Pretreatment monitoring

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 areas, views the pretreatment tag the applicator is required to attach to the site, after he performs a pretreatment. Then, the inspector measures the site, calculates the amount of termiticide that should be applied and compares his findings with the information the applicator documents on the tag. The inspector uses the preteat tag to not only verify the proper quantity, strength, and dosage, of termiticide to a site, but also to determine if the business performing the treatment is reporting the treatments to the Office as required by Law. In FY 2014, OPM inspectors performed 204 Consumer Protection Monitors.

Investigations

The Office conducted 98 inquiry investigations in FY 2014 with approximately 61% of these becoming formal complaints. Inquiries are "threshold investigations". Basically, it's a preliminary investigation, which takes no more than 30 to 60 calendar days for Compliance staff to determine if there is evidence of a violation or not. Inquiries come from consumers, licensees, agency Staff, or referrals from the USEPA or other State or local government agencies.

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) these guidelines take 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 2014 the OPM adjudicated 67 complaints.

Consumers can visit <http://www.sb.state.az.us/> and look under the Complaints link to view the complaint history of any respondent whom the OPM has opened and adjudicated a complaint.

<u>Type of Disciplinary Action</u>	<u>Number</u>
Administrative Warnings	49
Civil Penalties	\$12,650.00
Number of cases that involved Civil Penalties	36
License Suspensions	3
License Revocations	0
Dismissals	3
Cease and Desist Orders	16

Type of penalties associated with the 67 adjudicated complaints

Continuing Education (CE)

Individuals holding an applicator certification and those holding a certified qualified applicator license are required to obtain 6-hours of CE and 12 hours of CE respectively, per year. While commercial CE providers offer training on new pesticide technologies, equipment, application techniques, and business practices, OPM staff offered training regarding Rules and Statutes (e.g. applicator and qualifying party responsibilities, proper record keeping (essentially, how to stay out of trouble)). In FY2014 compliance staff provided CE classes in Phoenix, Tucson, Yuma and Prescott to 224 applicators.

<u>Location</u>	<u>Number of Attendees</u>
Phoenix	111
Tucson	29
Yuma	19
Prescott	65

Continuing Education provided in FY2014

Outreach

In FY2014 compliance staff spoke to industry members or participating in CE classes, addressing the new Laws and Rules. Staff provided Laws and Rules education to a total of 1082 license holders. Additionally, compliance staff participated in 3 tribal training classes, whereby a total of 106 tribal inspectors received instructions on OPM laws and inspection guidelines.

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 (pursuant to ARS 32-2307). This fiscal year, inspectors visited 34 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.

Plant Services Division (PSD)

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.

One serious pest threat presently pressuring Arizona is the most devastating disease known to affect citrus worldwide, citrus greening, or Huanglongbing (HLB). The disease affects all species of the citrus family and once a tree is infected, there is no known cure. Within a few years the fruit becomes bitter and useable and the tree will eventually die. The disease has been found throughout Florida and portions of Texas, Louisiana, South Carolina and Mexico. The presence of the disease has had a significant impact to the economy and employment in affected production areas. Although the disease has not been detected in the State, in 2009 the vector that transmits the disease (the Asian citrus psyllid) was discovered in Yuma County, near the border with Mexico. Since then, the vector has advanced to other areas of the state putting commercial citrus production and the citrus nursery stock markets at risk.

Even with multiple safeguarding measures in place, the risk of introducing the disease to the State is significant. With the trade of commerce that can harbor infected material, the increase of detections of the disease and vector in neighboring states and countries, and the illegal movement of infected plants from one area to another, are factors in making it increasingly difficult to exclude the disease from the State. Maintaining a viable front to limit the introduction of the disease and quickly responding to a new detection will be vital in protecting Arizona's citrus from this potentially devastating disease.

In addition, the potential for introduction of a devastating plant pest or disease of pecans and other tree nuts is high due to pest pressures in New Mexico and Mexico. Arizona has seen significant growth in the production of tree nuts and an increase in the amount of tree nuts shipped into the State for processing. Associated with this expansion and movement, is the prominent increase in the potential for introduction of a dangerous plant pest or disease through the transport of commodities back and forth across interstate and international borders.

Specifically, one of the biggest pest threats comes from the pecan weevil. The pecan weevil is the most devastating pest of pecans in the United States. The pecan weevil is found from New York to Iowa, south to Oklahoma, and across the southeastern states from Florida to Texas. Occasionally the weevil is found in New Mexico, but in that area the pest is under eradication, thereby limiting its movement further west. Other pests of concern include pecan casebearer, hickory shuckworm, and pecan phylloxera.

The Division, in partnership with stakeholders, is able to validate that clean product is exported from the State and safeguard our nut industry by vigorously inspecting facilities that receive and process tree nuts from local sources and from other states and countries. A pheromone trapping system is also utilized to identify potential threats in commercial nut production groves that act as a first line of defense for early response, and provides the best opportunity to identify an emerging pest issue and mitigate the problem in a timely manner.

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 and marketability 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 Top Ten Most Unwanted Agricultural 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.



HLB infected and healthy citrus leaves -
University of Florida



Citrus greening – H.D. Catling

Regulatory restrictions are in place for Florida, Georgia, Puerto Rico and portions of California, Texas, Louisiana and South Carolina for citrus greening; for the 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

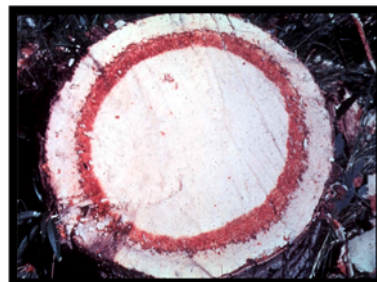


White larvae (grubs) with cocoon made from palm fibers -
Mike Lewis, Center for Invasive Species Research

- **South American Palm Weevil** – The South American Palm Weevil is a major pest of concern due to the Red Ring Nematode carried by the weevil that is spread to healthy palms in the landscape and commercial date groves causing Red Ring Disease. Red Ring Disease can be fatal in as little as five months to several species of palms, including date and fan palms, two popular palms in Arizona. Currently the weevil, but not the disease, has been detected in the southern border regions of both California and Texas.

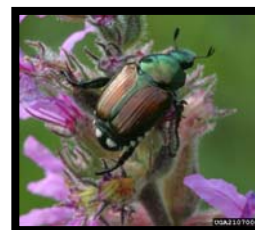


Adult South American Palm Weevil -
Pest and Diseases Image Library,
Bugwood.org



Tell-tale red ring in cross-section of a palm infested by red ring nematode-
Society of Nematologists slide collection

- **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. National harmonized regulatory requirements aid in preventing the interstate spread of this pest on nursery stock and other conveyances. 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** — (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.



Fruit Fly Larvae – FDACS-DPI



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

- **Giant African Snail** – Considered one of the most damaging snails in the world. A prolific forager, this species of snail can have devastating effects on a number of agricultural crops and ornamental plants. Its slime can also be harmful to human health if ingested from contaminated garden crops.



Giant African Snail – FDACS/DPI



Giant African Snail – USDA-PPQ

- **Khapra Beetle** – (KHB) is considered one of the world's worst pests of stored products. KHB thrives in warm, dry climates, making it a significant pest risk for Arizona. Larvae are the most damaging stage; adult KHB do not feed. KHB can damage 70% of stored grain it infests, resulting in significant reduction of grain weight, grade and quality. In addition to grain damage, KHB larvae have barbed hairs that can irritate the skin and respiratory tract and, if ingested in large numbers, can result in serious gastrointestinal irritation. Adult KHB are flightless, and therefore, human transport of infested commodities is the primary method of long distance dispersal.



Khapra Beetle - Ministry of
Agriculture and Regional
Development, Bugwood.org



Khapra Beetle - Ministry of
Agriculture and Regional
Development, Bugwood.org

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 2014, inspection staff intercepted 5,975 pests within the state's interior through various inspections with 311 of the pests intercepted identified as serious pests of concern; 1,603 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.



Digital imaging system -
ADA-PSD

Biological Identification Group

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. The staff also plays a key role in the development of Pest Risk Assessments and Economic Impact Statements. This allows the Division to make accurate, real-time decisions on pest mitigations and evaluating the threats to state's agriculture stakeholders.

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 into 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.

Statewide, an average of 7,182 traps were placed, serviced and monitored throughout FY 2014 for up to 15 targeted pest species. A majority of these traps are regularly serviced 2 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 Plant Services Division'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 2,135 traps placed statewide and currently meets or exceeds the Federal trapping protocols.

In FY 2014, 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, 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.



Commodity Inspection -
ADA-PSD

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 there were 358 Gypsy Moth traps placed during this fiscal year at high risk locations. High-risk locations, such as RV parks, are routinely trapped.

Citrus Greening/Asian Citrus Psyllid

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 under threat from a devastating disease, citrus greening or Huanglongbing. A citrus tree, once infected, will eventually die. The Plant Services Division has trained inspectors that carry out a number of pest detection methods to detect the first sign of the disease or the pest that carries the disease, the Asian Citrus Psyllid (ACP). The Division, and through a partnership with the USDA, has deployed on average 2,677 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. The state also has safeguarding methods in place for producers of citrus nursery stock through the Clean Citrus Stock Program. To date, the disease has not been detected in the state.



Screened nursery facility -
ADA-PSD

Khapra Beetle



Grain facility - ADA-PSD

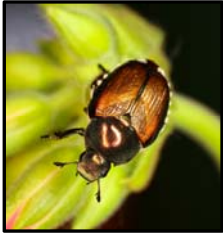
To secure the exportability of grain and stored dry products produced in Arizona, methods are in place to detect early infestations of the devastating Khapra beetle. During FY14, there were 276 traps were placed and monitored. The Khapra beetle is one of the world's most destructive stored-product pests. 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
Adult**- Stephen
Ausmus, USDA-ARS

Japanese Beetle

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 nationally harmonized regulatory requirements.

Palm Pests

The Red Palm Weevil and the South American Palm Weevil are major concerns to the ornamental palm and palm date production areas of the state. These weevils can have major impacts on the health of palm trees and can eventually kill a tree if not placed under control. The South American Palm Weevil can also carry a nematode that can cause Red Ring Disease that can kill palm trees as well.

Commitment to Service

The Plant Services Division (PSD) 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 2014, inspectors issued 1,436 single shipment certificates for shipments of agricultural commodities to other states. Nursery stock accounted for 150 certificates.

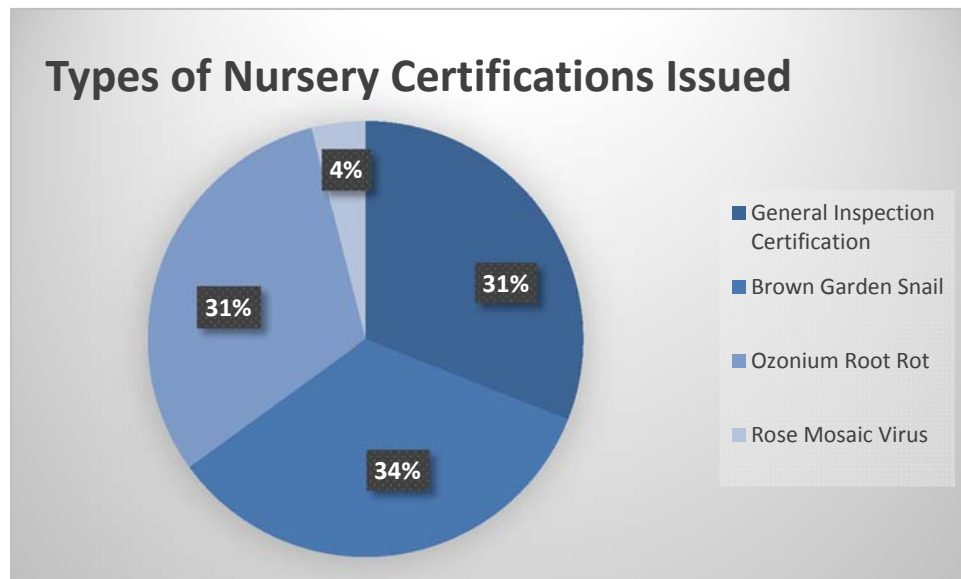
- **Voluntary nursery certification program**



Nursery inspection - 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 also administers the state’s Clean Citrus Stock Program, under Director’s Administrative Order DAO 11-6, which allows citrus nursery stock producers 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 screen house and follows a treatment and inspection protocol. The Division received 278 applications during calendar year 2013 from Arizona nurseries requesting certification to comply with the entry requirements of other states, and issued 254 individual certificates following inspection of the applicants’ properties.



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.

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

Noxious Weeds for Sale

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. Plant Services Division inspectors find prohibited plant species in retail seed displays, in display ponds and retail ethnic markets on occasion and the product is restricted from sale.



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

Additional pathways for the distribution and sale of noxious weeds are through internet sales, peer to peer auctions, plant exchanges amongst hobbyists and sale sites. These activities, and the potential movement of noxious weed species, may inadvertently cause the introduction and an infestation of a noxious weed.