

*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**

**FY2012 – 2013**

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# Animal Health and Welfare Program

## *Priorities and Oversight*

The first priority of the Animal Health and Welfare Program (AHWP) is the prevention of certain diseases of livestock, poultry and commercial fish; and if established, their subsequent eradication quickly. Relatedly, the AHWP protects the public from diseases which are transmissible from livestock to people. Field staff in the 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, 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*

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

- Brucellosis
- Tuberculosis
- Pseudorabies
- Equine Infectious Anemia
- Scrapie
- Chronic Wasting Disease

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 salmonella species)
- Animal Disease Traceability
- Multiple Obligations under Emergency Support Functions of the State Emergency Response and Recovery Plan

# USDA Cooperative Agreements

Traditionally various animal health surveillance programs have been funded via grants with USDA APHIS VS. These have included avian health, cattle health, limited zoonotic concerns.

April 1, 2013 began the new reporting year for USDA AHPIS VS. With this new period, they have restructured their program. Effective this year (Apr 1, 2013 – Mar 31, 2014) all agreements will fall into one of two categories: Animal Disease Traceability (ADT) or Umbrella.

## *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 forty-eight hours of its recognition. This is a challenging goal that will not be met for several years.

## *Umbrella Grant: Foreign Animal Disease (FAD) Surveillance Program*

Early recognition of Foreign Animal Disease (FAD) is essential to reducing the impact of a devastating disease outbreak.

Foreign Animal Disease Investigations (FADIs) that were conducted by Federal and ADA staff veterinarians are summarized in the following chart.

|                             |           |
|-----------------------------|-----------|
| Beef                        | 4         |
| Bird (pet)                  | 1         |
| Canine                      | 2         |
| Dairy Cattle                | 1         |
| Equine                      | 10        |
| Poultry                     | 8         |
| <b>TOTAL INVESTIGATIONS</b> | <b>26</b> |

The equine piroplasmosis incident was resolved October 2012 with the mare that had been held under quarantine completing a research treatment which successfully eliminated the parasite.

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

### *Animal Movement Regulations*

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

### *Animal Disease Traceability System*

A significant event occurred in ADT with the publication of the final federal rule in December 2012. Its immediate impact in Arizona is likely minimal as the vast bulk of livestock moving across Arizona boundaries is excluded from the rule (cattle less than 18 months of age.)

The voluntary Animal Disease Traceability System in Arizona continues to be overseen by ADA. The focus of the program continues to be premises registration (Premises ID) for all eligible producers of beef and dairy cattle, swine and sheep, goat, equine owners. Registered premises are assigned a seven digit, alpha-numeric Premises ID number. This effort continues to require a monumental outreach effort in order to educate all livestock and poultry owners. ADA continues to receive funding from USDA APHIS VS for this voluntary program.

## Annual Licenses

### *Aquaculture*

The aquaculture program regulates commercial operations that grow, transport and process fish and shrimp. Numbers of licenses issued: transporters (18), processors of fish and shrimp for human consumption (7), growing facilities (22), research and educational facilities (7), and operations that charge a fee for fishing (5).

### *Feedlots*

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

## Inspection Data Tracking

The Livestock Inspection Program tracks field activities with the dispatch Agricultural Incident Reporting System. Since 2002, a number of activities have been closely monitored and include such items as the number of inspections for health, the movement of range cattle, cattle for processing, the number of investigations for animal care issues, stray animals / animals-at-large, and livestock theft.

### *Surveillance Statistics*

Currently, over 3,900 producers are approved to use self-inspection. Livestock owners understand the value of documenting animal movement and have accepted responsibility for intrastate documentation through self-inspection. AHWP officers, inspectors and deputies document sales and interstate movement of range cattle, and movement of cattle to custom exempt slaughter plants. The sheep, goat and swine industries continue to support the inspection statute and rules governing their respective species. Exhibitions, fairs and shows have also been supportive of the "seasonal exhibition pass" implemented by rule. Livestock theft investigation and enforcement cases remain at a low level, and Arizona continues to maintain disease free status in all industry / state / federal cooperative disease control programs.

### *Arizona Livestock Incident Response Team Program*

The Arizona Livestock Incident Response Team (ALIRT) program was implemented through legislative authorization in FY 2005. Annual funding secured by the efforts of the Arizona Cattle Growers' Association has been used to train and equip participating private veterinarians to conduct investigations of unusual livestock disease events, and to conduct outreach and education to the livestock producers. Since its initiation, several investigations have been conducted and in every case, the response resulted in a preliminary diagnosis within 48 hours, with laboratory diagnosis confirmation soon after. ALIRT is an emergency response program overseen by ADA and implemented through cooperation with the University of Arizona, Department of Animal Science, and the Department of Veterinary Science Veterinary Diagnostic Laboratory. USDA Wildlife Service and Veterinary Service actively participate in a program designed to facilitate the potential diagnosis of unexplained cattle losses. Once a problem has been discovered, various levels of response may be indicated. It all starts with the producer, local veterinarian and/or the local University of Arizona Cooperative Extension Office. If warranted, trained ALIRT private veterinarians will respond to the scene, start the investigation, and collect samples. This is followed by a conference call of the ALIRT steering committee that determines what, if any, additional actions are necessary. The cost of case work-up is covered by ALIRT program funding, and includes

expenses for the ALIRT private veterinarian, other response personnel, as well as laboratory expenses related to the diagnosis. Once a diagnosis is made, and/or a treatment program is implemented, the expense becomes the responsibility of the producer. The producer plays a key role in this process, starting with the reporting of a problem in his herd. The producer also is important in preparing a herd history and identifying any contributing factors that may assist in diagnosis. The ALIRT program only responds at the invitation of the owner or manager and is available to individual producers who have significant unexplained animal illnesses and/or death, or if an area or region is having multiple suspicious livestock losses. The ALIRT program was designed for the producer and all information collected remains confidential. Emergencies are reported by calling the Arizona State Veterinarian 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 program is a federal-state cooperative program, funded 50% from the state general fund and 50% by USDA-FSIS. The program oversees slaughter of amenable meat animals and poultry which are offered for official inspection prior to sale to the public. Operating to help ensure both food safety and truth in labeling to consumers, inspectors visit regulated facilities on a daily basis. The program authority is established by state statutes and rules, the federal meat inspection act, and the federal poultry products inspection act.

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

ADA inspectors receive training including Hazard Analysis Critical Control Point (HACCP) inspection procedures, Sanitation Standard Operating Procedures, and animal ante and post mortem inspection procedures for disease.

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

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

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

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

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

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

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

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

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

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

Inspectors also periodically visit other processors known as "custom exempt" processors, which are firms that process meats, game and poultry for the personal consumption of the livestock owner. These types of processors may not sell meats to the general public without obtaining an official slaughter and processing license.

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

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

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

### *Meat and Poultry Compliance Program*

An integral part of the Meat and Poultry program is compliance. ADA's Compliance Officers and other staff are utilized to enforce both Arizona and Federal statutes, with respect to legal slaughtering, truck wrecks involving meat products, and meat and poultry products which have been illegally imported into Arizona and/or the United States. Compliance helps to ensure that animals are slaughtered in a humane fashion and that meats are processed in a sanitary and safe manner. The agency compliance officer also investigates consumer complaints regarding meat quality, safe handling, preventing inedible product from entering the human food chain and other issues related to safe food handling.

## Dairy and 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 procedure, 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.

ADA 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. 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 ADA inspectors and submitted to the State Agriculture Laboratory for testing. On average, almost 3,000 samples are collected and submitted each year.

### *Universal Sampling System reduces the cost of milk sampling*

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 assure 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 the 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 the milk and holding it a specific temperature for a specified time period (161 degrees for 15 seconds, for example). This process is known 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 that 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.

## **FSQA - Egg & Egg Products Inspection Program**

Egg inspection program staff provides inspection services to the public, industry, and the federal government. The egg inspection program is funded entirely from a "mill fee" assessment from industry on each dozen of eggs or pound of egg products sold in Arizona. The program has operated on industry assessments since 1940.

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

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

### *USDA Inspection and Grading Program*

The ADA also maintains cooperative programs with the U.S. Department of Agriculture (USDA) to provide “grade labeling” services to industry upon request. These cooperative programs also include surveillance and enforcement under the federal Egg Products and Inspection Act, which regulates the movement and processing of certain types of under-grade eggs to keep them from entering the market. The ADA also enforces the Agricultural Marketing Act of 1970.

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

Graders perform both temporary and resident (in-house) grading services to the egg industry in Arizona. 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.

### *Service to the animal industry – Consumer protection*

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

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

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

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

For the 2012 exercise, the Department met all standards for emergency response. The food inspection programs are integral to departmental participation in such drills, which also includes animal health veterinarians and livestock officers and brand inspectors.

## FY 2013 Calls for service from the public

| Inspections                    |              |
|--------------------------------|--------------|
| Ownership                      | 100          |
| Butcher                        | 1,254        |
| Highway and Road Kill          | 76           |
| Animal Health                  | 3,258        |
| <b>Total</b>                   | <b>4,688</b> |
| Welfare                        |              |
| Equine                         | 892          |
| Cattle                         | 217          |
| Goats                          | 55           |
| Sheep                          | 12           |
| Swine                          | 17           |
| Other                          | 4            |
| <b>Total</b>                   | <b>1,197</b> |
| Out of Place                   |              |
| Loose and Stray                | 1,063        |
| Theft                          | 36           |
| <b>Total</b>                   | <b>1,099</b> |
|                                |              |
| Administrative                 | <b>498</b>   |
| Native Plants                  | <b>38</b>    |
| Dogs Chasing/Killing Livestock | <b>26</b>    |

# 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 90.2 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 | 26,025,177 | Leaf lettuce | 5,079,708 |
| Romaine lettuce | 17,111,269 | Tomatoes     | 3,455,319 |
| Cantaloupe      | 8,531,244  | Broccoli     | 4,239,255 |
| Spinach         | 5,432,702  | Watermelon   | 3,050,278 |
| Spring Mix      | 9,638,913  | Cauliflower  | 2,956,785 |

As detailed below, the Citrus, Fruit and Vegetable Standardization Program and the Federal State Inspection Program conducted 23,284 inspections last year. In addition, the Citrus, Fruit and Vegetable Standardization Program issued 529 licenses to the produce industry.

## *Industry Funded -- Industry Supported*

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

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

## *Standardization Program*

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

## *Federal-State Inspection Program*

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

This federal program administered by the department also enforces United States import requirements and marketing order restrictions at the international border between Arizona and Mexico. Significantly, Nogales is the second busiest port-of-entry for produce in the United States. Last year, department staff inspected more than 4.9 million packages of field tomatoes, 600 thousand packages of greenhouse tomatoes, 2.7 avocados and 15.5 million lugs of table grapes imported from Mexico and a variety of other commodities, including watermelons, peppers, cucumbers, squash, onions and citrus.

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

### *Third Party Audit Program*

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

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

### *Pesticide Safety Training*

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

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

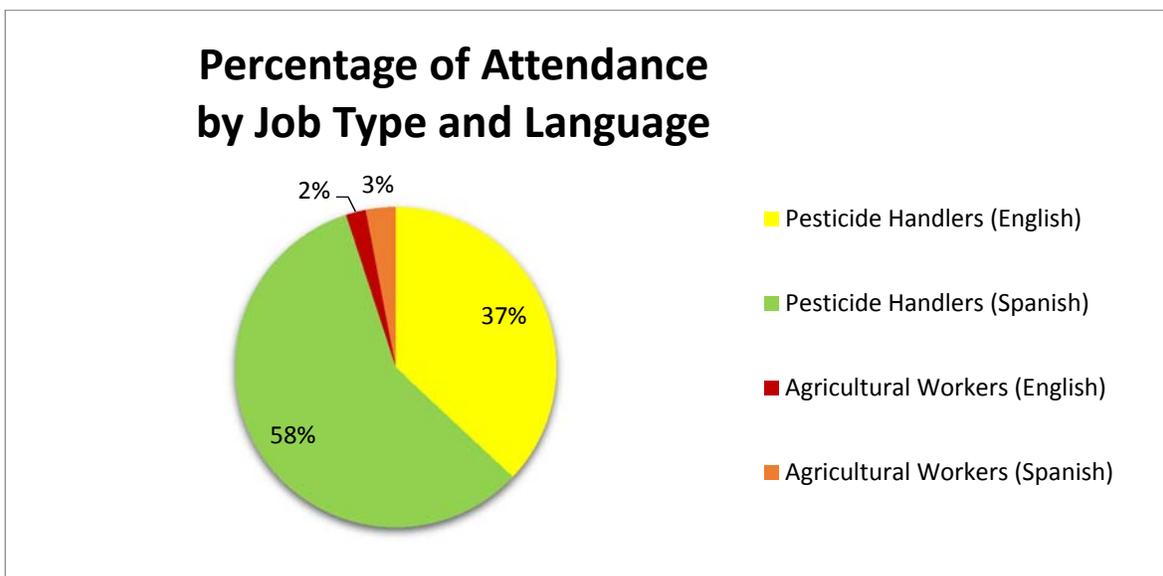
The training courses are provided in English and Spanish and are open to anyone who would like to attend. The courses are also promoted to safety trainers who want to observe a training to gather ideas for their own sessions and growers who would like to learn more about state and federal laws pertaining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

During FY 2013, ACT staff presented pesticide safety training to 403 people who were employed by 68 agricultural operations, landscaping companies, tribal communities and governmental agencies.

As is displayed in the following chart, 96% of the people who attended the training were pesticide handlers and the remaining 4% were agricultural workers.

A two-hour pesticide handler course was provided to 386 people who planned to mix, load, and apply pesticides. The course was presented in English to 151 people and in Spanish to 235. Of the handlers, 11 licensed applicators participated to receive an EPA Pesticide Training Verification card and 2 hours of Continuing Education toward the renewal of their licenses.

In addition to the pesticide handlers, 17 people attended a one-hour pesticide safety course designed for agricultural workers. Agricultural workers perform tasks such as weeding, irrigating, and harvesting crops in areas where pesticides had been applied in the previous 30 days. Seven of the 17 agricultural workers who attended this training received the information in English and 10 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 three, 4-hour classes on pesticide safety and equipment calibration to 62 landscape professionals. Two of the classes were presented in Scottsdale and the third was held in Tucson. The pesticide safety and calibration class is one of twelve courses that are 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. A 50-question thematic exam is administered at the end of each course. After passing each of the twelve courses and exams, attendees become Arizona Certified Landscape Professionals.

## Arizona Pesticide Safety Train-the-Trainer Workshops



*A workshop attendee prepares for a small group demonstration on personal protective equipment.*

Each year, the Arizona Department of Agriculture's (ADA) Agricultural Consultation and Training Program works 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.

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, 2012 and June 30, 2013, the team of instructors presented 17 workshops to 335 people in 8 Arizona locations.

## 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 of the Phoenix area.

Between September 2012 and April 2013, ACT staff was invited to provide seven pesticide applicator exam events in five locations. The events were held in Tsaile (Navajo Nation), Cottonwood, Willcox, Prescott and Las Vegas.

Most of the 121 test takers who participated in these events were state, federal and tribal government employees who will use pesticides in watershed restoration projects and invasive weed control along the Colorado River. Sixteen test takers worked on farms in Cochise and La Paz County.



*ACT staff administers private and commercial pesticide applicator licensing exams to groups by request.*

## 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 November 2012, ACT Pesticide Program staff created a survey to gather the agricultural community's input for the 2013 Pesticide Safety Train-the-Trainer Workshop schedule. The seven-question survey was created in English and translated into Spanish. It was distributed electronically to 1,702 people on a pesticide courses and resources e-mail list.

The survey proved to be a great new resource. Twenty-three respondents offered ADA free use of their meeting rooms and training facilities. More importantly, the feedback enabled ADA to schedule four years of Train-the-Trainer Workshops during months and in locations that are convenient for the agricultural community.

The 2013-2016 workshop schedules have been placed on ADA's new pesticide trainer webpage – a resource conceptualized by ACT Pesticide Program staff and created by ADA's Information Technology Manager. In addition to the workshop schedule, the webpage includes registration forms as they become available, and links to forms, contacts and trainer information.

## 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. The RABMP program provides a means by which Arizona's agricultural community can request compliance assistance without incurring regulatory intervention for applicable federal, state and local regulation.

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

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

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

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

New this past year, the Environmental Protection Agency (EPA) re-designated a portion of Pinal County as nonattainment for the 24-hour PM10 National Ambient Air Quality Standard. This new area is named the

West Pinal County Nonattainment Area and is made up of portions of central and western Pinal County. Senate Bill 1225 mandates all agricultural activities in a new nonattainment area to fall under the current PM10 Ag BMP Program. Because of this designation, all agricultural producers greater than 10 acres in the West Pinal County Nonattainment area must now implement at least one BMP in each of the categories.

Examples of BMPs include:

- Using a track-out control system, helping to remove mud and soil from tires of farm equipment before they enter a paved public road.
- Planting and tillage based on soil moisture is timing activities to coincide with precipitation or the application of water.
- A wind barrier is constructing a fence or structure, or provides a woody vegetative barrier by planting a row of trees or shrubs, perpendicular or across the prevailing wind direction.
- Use drag equipment instead of push equipment to maintain pens.
- Use a water misting system that project a cloud of very small water particles onto the manure surface.
- Reduce vehicle speeds on unpaved farm roads not to exceed 20 mph.
- Install engine speed governors on feed trucks that limit speeds to 15 miles per hour.



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

- On-site visits to farms and nurseries to make site specific assessments and recommendations that can ensure compliance with air quality regulations. These visits include discussions of the Ag BMP program and the BMPs available for tillage and harvest, non-cropland, and cropland categories. For fiscal year 2013 there were 146 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 2013 there were 20 trainings, presentations, and promotions of the program to agricultural workers and representatives. Outreach and training reached 2,629 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 2013, ten forecasts were sent to 283 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 2013, 1,115 copies of the newsletter were sent to 283 stakeholders in Maricopa, Yuma, and Pinal Counties. Copies of the newsletter were sent with the State Land Department's newsletter to 300 producers in the fall.
- 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 2013, ten articles and ads were published with a readership of 19,815 people.
- The air quality program worked with other agencies such as Arizona Department of Environmental Quality (ADEQ) and county farm bureaus to address compliance issues needing correction. These include public complaints, track-out issues, and violations. During fiscal year 2013, eleven issues were corrected.

During fiscal year 2013, the Governor's Ag Best Management Practices Committee and the Technical Workgroup was reconvened to address the partial disapproval by the EPA of the Ag BMP Program. The EPA felt that the BMPs lacked "specificity" and "enforceability" due to the lack of a mandatory reporting system. The workgroup was tasked to redefine the BMPs and create a reporting system to capture the needed information that will meet EPA's request. The Governor's Ag Best Management Practices Committee did suspend the March 31, 2013 reporting deadline for producers until March 2014. Another workgroup was convened to create BMPs for the irrigation districts in Pinal County and future nonattainment areas.

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 2013 outreach continued with meeting producers, attending industry functions and reestablishing stakeholder meetings. Agriculture industry members met with ADEQ and EPA through the local Natural Resources Conservation District to discuss the "next" steps in reaching attainment status.



## Agricultural Conservation Education Program

In September 2002, the Arizona Department of Agriculture's (ADA) Agricultural Consultation and Training Program (ACT) began assisting the agricultural community through a partnership with the United States Department of Agriculture's, Natural Resource Conservation Service (NRCS). Since its inception this partnership has evolved into the Agricultural Conservation Education Program (ACEP). The ACEP coordinator assists agricultural producers to protect the environment through compliance assistance outreach and education, to conserve the State's natural resources through Conservation Technical Assistance (CTA), and assists them with designing and implementing conservation practices with cost share assistance from Farm Bill Programs through NRCS.



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

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

The NRCS assists the Natural Resource Conservation Districts (NRCD) with meeting their conservation goals. The ACEP coordinator is primarily assigned to the NRCS Avondale Field Office which supports the majority of Maricopa County and four NRCD offices, Agua Fria/New River, Buckeye Valley, Gila Bend, and Wickenburg. The resource concerns addressed with the 2013 EQIP applications include Air Quality including particulates and greenhouse gases, Soil Condition and/or Erosion and Water Quality and Quantity. The ACEP coordinator works directly with the NRCS Environmental Quality Incentives Program (EQIP) which provides voluntary conservation programs for farmers and ranchers that promotes agricultural production and environmental quality. EQIP offers financial and technical help to assist participants to install and implement structural and management practices on eligible agricultural land. Currently, the ACEP coordinator is assisting NRCS with many EQIP



and WHIP conservation contracts including 29 active contracts for 2010, 11 for 2012, and seven for 2013. The total acres under active conservation contracts for 2010 are 6,679.60, 2012 acres under contract are 1,561 and 2013 acres under contract are 1,825.10. The ACEP Coordinator continues 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 2008 to current.

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

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

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

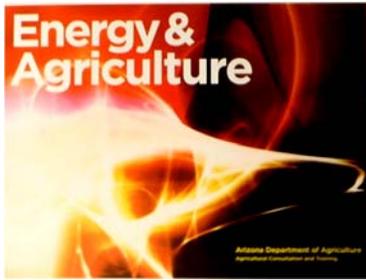


Further educational outreach provided by ACEP includes maintaining and updating The CAFO Ready Reference Guide. This concise guide is a collection of the various county, state, and federal agencies that regulate and/or offer compliance programs for Arizona's CAFOs. Other outreach is conducted by answering producer and consumer questions and providing information through letters, emails, faxes and phone calls. Total number of people reached through outreach and educational materials for fiscal year 2013 was 5,031.

## 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 your energy costs is to have an audit completed and see where to reduce energy use. Producers can reduce their input costs, maintain production, protect natural resources, reduce dependence on fossil fuels, and save money by conserving their energy use. These audits may be completed on farms, nurseries, concentrated animal feeding operations and ranches to evaluate energy consumption.

Currently, the program consists of two 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 consists of



analyzing the agronomic operations like crop and pasture management, forestry practices, manure handling, irrigation, and other farming activities.

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

Outreach and education for fiscal year 2013 included:

- On-Site visits include a discussion of the program and its benefits, the steps involved in the auditing process, and what is expected from the producer. There were 87 visits to local producers to promote the program and its benefits.
- The program was promoted during various agricultural industry functions and meetings. This includes the local and State Farm Bureaus, Arizona Nursery Association, United Dairymen of Arizona, and local Natural Resources Conservation Districts. In fiscal year 2013 there were 20 promotional opportunities that reached 2,629 participants.
- Publication of various articles and ads in industry periodicals provided information on the program, its benefits, and how to apply. In fiscal year 2013, ten articles and ads were published with a readership of 118,874 people. An article was published in *American Nurseryman*, a national publication of 103,000 readers. The article touted the benefits of the program and praises from a nurseryman that received an audit.



The second aspect of the On-Farm Energy Audit Implementation Program is working with a third party vendor to complete the energy audit. EnSave is the auditing company that is conducting the audits. They are NRCS certified Technical Service Providers (TSP) that follow the American Society of Agricultural and Biological Engineers (ASABE) Standards. ACT Staff acts as the data collectors for the auditing company and collects the needed information to complete the audit. This data includes information on motors, pumps, generators, compressors, lighting, ventilation, and irrigation systems on the property. This data helps in the process of analyzing 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. The purpose of the training was to train ACT Staff to perform the onsite data collection for an energy audit that will in turn provide support for NRCS Agricultural Energy Management Plans, Rural Development REAP grant and loan applications, and other energy efficiency programs for producers.
- In fiscal year 2013 ACT Staff received 23 applications for On-Farm Energy Audits. All applications must be submitted to the Arizona Department of Agriculture to be eligible for the program. The applications are reviewed and evaluated to determine whether the applicants will receive Headquarter or Landscape audits.



- Fifty-four applications were submitted to EnSave to receive audits in FY13. These include nine applications for Headquarter Audits that are conducted on concentrated animal feeding operations and greenhouses. Forty-five applications for Landscape Audits to be conducted on farms and ranches were also submitted. Of the 54 applications, 12 were canceled upon review because facilities were already energy efficient and no recommendations could have been made.
- From the 54 applications submitted, 26 audits have been completed. Seventeen audits were Landscape Audits on farms and ranches and nine were Headquarter Audits on dairies and greenhouses. 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 recommendation.

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



The Agricultural Consultation and Training (ACT) Program of the Arizona Department of Agriculture (ADA) through a Specialty Crop Block Grant Program, has entered into a cooperative agreement with the University of Arizona Cooperative Extension 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 those operations post-harvest while Good Agriculture Practices (GAP) refers to on-farm operations and systems.

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

Certification by the USDA, ADA or a third party is required for growers to sell their produce at the wholesale level. Without any certification, growers/producers are still able to market at roadside stands and farmers markets to the ultimate consumer. Selling wholesale to restaurants and others who then sell to the consumer is prohibited by the FDA food code without any certification of approved source. ADA's Citrus, Fruits and Vegetables (CF&V) Inspection Program, Arizona Department of Health Services and the County Health Departments are the regulatory enforcement entities for Arizona retail and wholesale facilities. Dr. Kurt Nolte, University of Arizona Extension Agent in Yuma, shown right, has developed this two half-day training that is traveling around the state. Dr.



Dr. Nolte's field is lettuce production and after food borne illness outbreaks from fresh vegetables, understood a need to increase food safety awareness to the area growers. These workshops have been presented to nearly 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. Lettuce, apples, pistachios, tomatoes, chili,

dried beans, field and greenhouse vegetable production and other growers have attended these workshops. Warehousing, storage and transportation operations have also attended.

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

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

All audits begin with a **General Questions Section**, (below left), regarding the food safety program, worker health and hygiene, and traceability.

- Component 1 is the **Farm Review** and delves into sewage, irrigation water, animals and wildlife, manure usage, soils and traceability.
- Component 2 is **Field Harvest and Field Packing Activities**. This section questions field sanitation and hygiene, field harvesting and transportation, and traceability.
- Component 3 is **House Packing Facility** and reviews the packing house facility conditions, wash packing lines water use and sources, packing house worker health and hygiene, general housekeeping, pest control, and traceability.

**General Questions**  
**Implementation of a Food Safety Program**

| Questions   | Points | Yes | NO | N.A | Doc |
|---|--------|-----|----|-----|-----|
| P-1 A documented food safety program that incorporates GAP and/or GHP has been implemented.                         | 15     |     |    |     | D   |
| P-2 The operation has designated someone to implement and oversee an established food safety program.<br>Name _____ | 10     |     |    |     | 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   |

- Component 4 is for **Storage and Transportation** and pertains to large warehouses who receive, store and ship fresh produce. These topics include product, containers, pallets, pest control, ice and refrigeration, transportation, worker health and personal hygiene, and traceability.
- Component 6 is **Wholesale Distribution Center/Terminal Warehouses** and reviews the receiving, storage facility/temperature control, pest control, repacking and reconditioning product, worker health and personal hygiene, shipping/transportation and traceability.
- Component 7 is **Preventive Food Defense** and takes into account the facility security for both employees and visitors, and security procedures of the facility.
- There is no component 5 which was titled **Traceability**, as the traceability factors were incorporated into each of the individual components.

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

There is no cost to attend the workshop 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 to those with plans to develop a food safety program and request an audit. Several of these producers with one-on-one consultations have successfully passed audits.

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

|  |
|--|
| <b>OPERATION/FARM:</b> _____   |
| <b>DATE:</b> _____   |
| <b>CONTACT:</b> _____  |
| <b>CONTACT:</b> _____  |
| <b>ACT REPRESENTATIVE:</b> _____   |
| <b><u>They want certification in Sections 1, 2, 3, 4, 6, 7.</u></b>        |
| This is a hydroponic operation, totally enclosed within a warehouse.       |
| Produce will include tomatoes, peppers, cucumbers, mushrooms, microgreens. |
| <b><u>GENERAL QUESTIONS</u></b>  |
| <b>IMPLEMENTATION OF A FOOD SAFETY PROGRAM</b>                             |
| P-1: in the beginning stages,  |
| P-2: _____   |
| <b>TRACEABILITY</b>  |
| G-1: Yes, a program is beginning to be developed, not written              |
| G-2: not yet   |
| <b>WORKER HEALTH AND HYGIENE</b>   |
| G-3: yes, City of _____ contract supplied                                  |

Once the grower or facility is confident they can pass the audit, they are able to contact the ADA Auditor to visit their location and administer the audit. Each question of each section is weighted for points, and a score of 80% is required for certification. Questions that do not pertain to the operation are removed and the score is adjusted to reflect that. A score below 80% will not pass the audit and the ADA Auditor will generate an Action Plan to inform the operator what would be required to pass. Once the discrepancies

are corrected a second audit will be scheduled. A score above 80% is passing and the operator will be sent a certificate from USDA's Agricultural Marketing Service to reflect that fact and be entered into the AMS's data base on-line for prospective customers and suppliers.

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



## Livestock & Crop Conservation Grant Program

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

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



During the two-year cycle, the LCCGP grant manual, grant guidelines, and rating criteria are subject to a public comment period. The fifth grant cycle 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 2014 or early FY 2015.

During fiscal year 2013, the LCCGP Coordinators worked to monitor completed projects from the previous grant cycles. The following types of projects were completed by grantees:

- Utilization of funds as match/cost share to other conservation grants. For example, if the applicant is participating in, or plans to apply for, a USDA NRCS EQIP grant which typically requires that the applicant provide a percentage of the total project funding, LCCGP funds could be awarded for use as the required cost share funds to the EQIP contract.
- On-the-Ground Conservation Projects (for example: riparian fencing, water resource development, grassland restoration).

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



The LCCGP 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 FY13, 56 of the 56 grantees from the fiscal year 2005 cycle, 65 of the 70 grantees from the fiscal year 2007 cycle, 55 of the 63 grantees from the fiscal year 2009 cycle, 29 of the 43

grantees from the fiscal year 2011 cycle and 3 of the 13 grantees from the fiscal year 2013 cycle had completed their proposed grant projects. Additionally, throughout fiscal year 2013, nearly \$900,000 was disbursed to grantees to work on their contracted projects.

Throughout fiscal year 2013, ACT personnel have participated in various stakeholder meetings and conferences to promote the grant program. Meetings include the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) State Technical Advisory Committee meetings, the Arizona Association of Conservation Districts annual meeting, the Arizona Cattlemen’s Association annual meeting and the Arizona Farm Bureau annual meeting.

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. 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 2013, Arizona's State Plan was approved by the U.S. Department of Agriculture's Agricultural Marketing Service (AMS), and a cooperative agreement, which provided \$1,265,138.45 in grant funds to the ADA, was executed on October 1, 2012. 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 May 9, 2013, AMS announced the availability of \$52 million in federal fiscal year 2013 funding. The funding is authorized by Section 701 of the American Taxpayer Relief Act of 2012 that extends Section 10109 of the Food, Conservation, and Energy Act of 2008, Public Law 110-246 (the Farm Bill) for one year until September 30, 2013. Each state department of agriculture is eligible to receive a base grant of \$171,852.89. In addition, AMS allocated the remainder of the grant funds based on the proportion of the value of **specialty** crop production in the state. The 2013 base grant amount plus the AMS assigned value of specialty crop production for Arizona is \$1,305,396.81. The SCBGP-FB Program Manager submitted the Arizona State Plan to AMS on July 10, 2013.

## 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 1.9 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 2013 Financial Status - Arizona Citrus Research Council**

|          |             |
|----------|-------------|
| Revenue  | \$37,955.31 |
| Expenses | \$ 5,800.00 |

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 nearly 22 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 2013, the Council continued to support research projects by granting over \$96,000 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 2013 Financial Status-Arizona Iceberg Lettuce Research Council**

|          |             |
|----------|-------------|
| Revenue  | \$85,246.31 |
| Expenses | \$62,598.75 |

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 \$35,000 was spent on research projects during fiscal year 2013.

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 2013 Financial Status - Arizona Grain Research and Promotion Council**

|          |              |
|----------|--------------|
| Revenue  | \$144,108.88 |
| Expenses | \$119,078.58 |

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

Legend:

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

C = capacity to perform testing with current resources

## Pink Boll Worm Eradication

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

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

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

## Homeland Security

The SAL continues to maintain its capabilities to provide assistance to the State and the Nation in the event of a homeland security emergency. Federal, State and local governments continue to work together to produce a network of laboratories capable of responding to emergencies. SAL has worked hard during the past year to secure its place within the laboratory emergency response infrastructure.

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

Food Emergency Response Network (FERN) – FERN is a network of state and federal laboratories that are committed to analyzing food samples in the event of a biological, chemical, or radiological outbreak or terrorist attack in this country. SAL is a member of the FERN for both chemical and microbiological testing.

## Quality Assurance Program

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

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

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

### *Laboratory Audits*

The dairy microbiology lab undergoes on-site laboratory audits that are conducted every three years by the U.S. Food and Drug Administration (FDA) Laboratory Evaluation Officers. Last year, in accordance with procedures related to the relocation of the laboratory, SAL underwent a special on-site audit; SAL passed the audit with flying colors. Such audits, combined with analyst participation in an annual proficiency testing program ensure the quality of the analyses conducted by the dairy microbiology laboratory.

### *Reference Standards and Reference Materials*

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

### *Proficiency Test Programs (PTPs)*

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

## Animal Disease Detection

The laboratory collected 288,110 blood samples and tested raw milk for the bacteria responsible for causing brucellosis, a severe reproductive disease in cattle and other animals. In humans the disease is known as undulant fever. Brucellosis may be transmitted from animals to humans through non-pasteurized milk. Since the 1940s, the USDA has sought to eradicate brucellosis from the U.S., resulting in the current Cooperative State Federal Brucellosis Eradication Program. States are designated brucellosis free when none of their cattle or bison is found to be infected for 12 consecutive months under an active surveillance program. Arizona has been brucellosis-free since 1987. The last area in the U.S. known to have an active presence of brucellosis is in and around Yellowstone National Park. Monitoring is still conducted in Arizona due to the presence of a very large slaughter facility in Tolleson where some of the cattle processed originate from the Yellowstone area.

## Food Safety

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

The U.S. Food and Drug Administration (FDA) certifies the dairy microbiology lab and individual analysts to perform testing on dairy products, dairy product containers, and environmental dairy water samples to allow export of Arizona's milk and milk products to other states. Tests conducted at SAL include bacteriological analyses, enzyme activity for proper pasteurization of dairy products, antibiotic residues, and other indicators of milk safety and quality.

## Forensic Testing

The SAL scientists test samples collected during investigations of off-target application of agricultural chemicals, incorrect application of pesticides to homes for the prevention of termite infestations or insect control, illegal discharge of pesticides into the environment, or failure to take necessary actions to protect industry workers. These regulatory samples are collected by investigators and delivered to the laboratory utilizing stringent chain of custody procedures. Sample types received include water, soil, produce, foliage, animal tissues, air, clothing and surface swabs. Complicating the analytical testing process are the over 11,000 pesticide products registered for use in Arizona, any one of which could need to be detected as part of an investigation. Analysis of these forensic samples requires advanced scientific tools and experience.

## Consumer Protection

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

The laboratory also analyzes commercial feed and fertilizer products to determine whether the amount of ingredients guaranteed on the label are accurate. This ensures that consumers receive agricultural products that meet the label guaranteed quality. For example, a fertilizer may have a grade guarantee of 10-20-5 which indicated the product must contain 10% nitrogen, 20% phosphorous and 5% potassium and the lab would run tests for all three ingredients. Similarly, a feed product may be guaranteed for protein, calcium, phosphorous or other nutrients requiring multiple testing.

SAL analysts conduct testing of commercially available seed products for purity, germination rate, and weed seed content to benefit Arizona's farmers, landscapers, homeowners, golf courses and seed export companies. Analyses were completed on seed samples to provide assurance that the seed label matches its guaranteed performance when planted and does not contain excess harmful weeds. SAL's seed analysts are certified by the Association of Official Seed Analysts.

# Environmental Services Division (ESD)

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

## *Staff Allocations*

The Environmental Services Division had 19.5 full-time employee positions as of June 30, 2013 which was no change from 2012. 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 a few new projects over this past year. Among these are a complete refresh of the Agency web site ([www.azda.gov](http://www.azda.gov)). The site was converted from the older programming language to a more resilient .NET language, resulting in a more attractive and easier to navigate site, with many more useful functions for the citizens. These functions include licensee lookups for various license holders, continuing education sites and hours lookups for license holders, and a secure area for Agency staff to access protected documents or information, separate from the general public.

This refresh of the site has resulted in an increase of approximately 2,000,000 total hits over last year, with a total of 6,111,165 total hits comprised of 236,965 unique visitors to our site. This is also an increase of almost 100,000 over last year. Continuing a trend from prior years, the Brands Advertisement is the most downloaded file, and again it is followed by the Brands Application. This trend has held true for the last 4 years.

Another project of note is a revamp of the Egg Licensing program. This custom project was a conversion from an older Access database, and has also been written in the newer .NET language. Increased reporting capabilities have been added and the program is much more stable and accurate due to increased data validation rules. This trend will continue in the coming year with other programs being updated.

A new electronic mail server has been installed, and is operating well. The new server has increased security for potential threats passed through email, and resulted in blocking 254,331 spam messages with potentially devastating results had they been delivered. Further, 861 instances of attempted virus attacks were also blocked, and 943,014 messages delivered to the end recipients without issue.

Lastly, the Agency maintained a 99.84% uptime reliability for all server based systems for the past year. This is attributed to 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. With the joining of OPM licensing staff and ESD licensing staff we were able to reopen the office over lunch, as we had been closing down from 12:30 p.m. - 1:30 p.m. due to staff reductions brought about by budget cuts. The best way to get needed forms for licensure application is to access our home page at [www.azda.gov/Common/forms.aspx](http://www.azda.gov/Common/forms.aspx).

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

## *Industry Fees Protect Consumers*

The Non-Food Quality assurance program is funded with no general funds. The funding comes from legislative appropriation of monies collected from: an annual \$10 commercial feed license and the \$0.20 per ton commercial feed inspection fee; an annual \$125 fertilizer license, a \$50 per brand and grade specialty fertilizer (fertilizer for nonfarm use, including home gardens, lawns, golf courses, parks and cemeteries) registration and a \$0.25 per ton fertilizer inspection fee; 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 to fund half a position at the State Agricultural Laboratory to perform seed quality analysis.

One hundred dollars of the fee paid for each fertilizer license and \$75 of the pesticide registration fee help support the Arizona Water Quality Assurance Revolving Fund (WQARF), which is administered by the Arizona Department of Environmental Quality (ADEQ), to be used for ground water cleanup projects. In 2013, \$1,085,663 in fees was collected for the WQARF: \$60,270 in fertilizer fees and \$942,400 in pesticide registration fees.

## *Licensing Requires Continuing Education*

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

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

During FY 2013 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 978 hours. The number of training courses approved for CEUs the year was 408 out of 408 requested. This was done through utilization of one person approving all CEU courses for both the ADA and for OPM. The response from those seeking approval has been positive, our ability to continue to issue timely CEU class credits.

## Testing Center

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

## Exams Administered in FY 2013

| TYPE OF EXAM                | Total Exams | Number Passed | Number Failed | Passing Rate |
|-----------------------------|-------------|---------------|---------------|--------------|
| Aerial Applicator (AAP)     | 10          | 6             | 4             | 60%          |
| Commercial Applicator (PUC) | 196         | 161           | 35            | 82%          |
| Custom Applicator (CAA)     | 2           | 1             | 1             | 50%          |
| Pest Control Advisor (PCA)  | 77          | 48            | 29            | 62%          |
| Private Applicator (PUP)    | 87          | 60            | 27            | 69%          |
| Fumigant Endorsement        | 35          | 10            | 25            | 28%          |
| Milk Sampler & Hauler       | 52          | 48            | 4             | 92%          |
| Cottonseed Sampler          | 0           | 0             | 0             | N/A          |
| <b>TOTALS</b>               | <b>459</b>  | <b>334</b>    | <b>125</b>    | <b>72.8%</b> |

The following chart represents the total number of licenses, permits and certificates issued by the Licensing Section during FY 2013:

| Licenses and Registrations Issued in FY 2013 |       |
|--|-------|
| Pesticide - Total Pesticides Registered      | 12767 |
| Agriculture Use Pesticides                   | 2405  |
| Non-Agricultural Use Pesticides              | 10362 |
| Fertilizer - Licensed Fertilizer Companies   | 471   |
| Specialty Fertilizers                        | 2693  |
| Feed - Licensed Feed Companies               | 675   |
| Seed Dealers                                 | 1281  |
| Seed Labelers                                | 206   |
| Dairy/Milk Industry Licenses                 | 332   |
| Aquaculture Licenses                         | 59    |
| Egg & Egg Products                           | 119   |
| Meat Industry Licenses                       | 236   |
| Livestock Brand Certificates                 | 1922  |
| Equine Certificates Issued                   | 93    |
| Certificates of Free Sale                    | 82    |
| Products Certified for Free Sale             | 2582  |
| Native Plant Permits Issued                  | 1196  |
| Number of Native Plants Permitted            | 49974 |
| WPS-Worker Cards Issued                      | 16944 |

|                          |       |
|--------------------------|-------|
| WPS-Handler Cards Issued | 11600 |
| WPS-Trainers Certified   | 312   |

The end of the year is very busy in licensing. The following chart represents the total number of pesticide use related licenses issued during the 2013 fiscal year all which expire at year's end. Other licenses that expire on December 31 are aquaculture, meat, dairy and pesticides. This brings an additional 12,533 licenses up for renewal during the same time of the year. Additionally, feed and fertilizer tonnage reports for the fourth quarter are due at year's end.

| <b>Pesticide Use Related Credential Summary FY 2013</b> |      |
|---|------|
| Grower Permits (PGP)                                    | 1152 |
| Pesticide Sellers (PSP)                                 | 136  |
| Ag Aircraft Pilots (AAP)                                | 48   |
| Custom Applicators (CAA)                                | 49   |
| Equipment Tags  | 484  |
| Pest Control Advisors (PCA)                             | 207  |
| Private Applicators (PUP)                               | 482  |
| Commercial Applicators (PUC)                            | 393  |
| Pesticide Responsible Individual (PRI)                  | 3    |

| <i>Fertilizer Tonnage FY 2013 (in Tons)</i> |        |         |         |
|---|--------|---------|---------|
| Dry   | Bulk   | Liquid  | Total   |
| 60,400                                      | 90,577 | 200,944 | 351,561 |

| <i>Feed Tonnage FY 2013 (in Tons)</i> |
|---------------------------------------|
| <b>Total 1,227,232</b>                |

## Compliance

### *Pesticide Compliance and Worker Safety Program*

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

## *Misuse is taken seriously*

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

## *Report pesticide misuse*

The ESD has a long standing Pesticide Hotline at 1-800-423-8876 where potential pesticide misuse can be reported. Complaints about pesticide misuse may also be reported by calling either of the two offices located in Phoenix and Yuma. Arizona requires this number be part of the 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 which normally is where agricultural and urban areas interface. This number is not monitored on weekends and holidays. Applicators have had to plan ahead and contact the division in advance of weekend monitoring requests for pesticide applications. There are no designated Pesticide Management Areas (PMA). The Director designates PMAs. PMAs may be ag/urban interface locations and have a history of concerns known by the ADA regarding nearby pesticide applications. Because we no longer have any designated PMAs, information is not sent to applicators. A reminder is posted on our website [www.azda.gov/ESD/PMA%2010.pdf](http://www.azda.gov/ESD/PMA%2010.pdf).

## *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. This is also a fairness issue as those who do follow the laws to legally register their pesticides, which cost millions of dollars, are at an economic disadvantage. Inspections at pesticide dealers and on agricultural establishments ensure that pesticides classified as restricted use are sold and used only by persons who have proven their competency for certification through testing to show they understand labels and can manage the associated risks. This also ensures that agricultural insecticides do not find their way into urban settings for residential use, which can be deadly. This is a growing concern due to the increased pressures from bedbugs.

## *Agricultural Worker Safety*

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

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

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

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

During the state financial year, ESD Compliance staff conducted twelve 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 Yuma, Chino Valley, Willcox and Casa Grande. In addition to these workshops, ESD Compliance Industrial Hygienists also presented five, 4-hour refresher courses for current pesticide safety trainers in Yuma and Maricopa.

### *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 27 - Safford, November 29 - Maricopa, or December 4 - Yuma. A total of 166 people attended the courses which covered soil fumigants, 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 as coordinated sampling efforts continued with nearly 1400 analyses performed on samples from 16 different monitoring wells for the pesticides on the state's groundwater protection list. ADEQ personnel do the sampling and our laboratory does the analysis. Working as a team with ADEQ all new agricultural use products are being reviewed before registration to ensure the state's groundwater resources are protected. The funding for the analysis has been provided by the US EPA through the agencies cooperative agreement.

### *Community / Industry Outreach Activities*

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

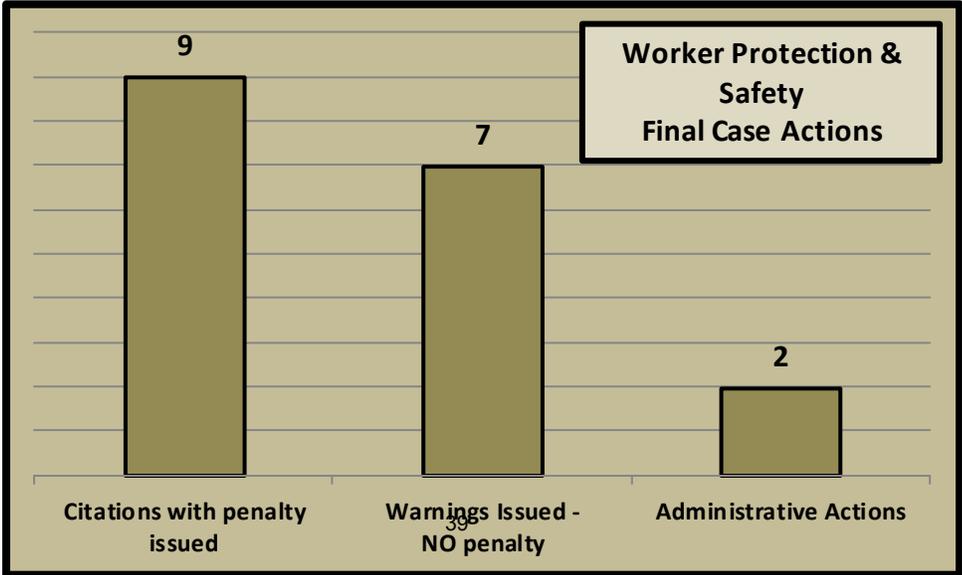
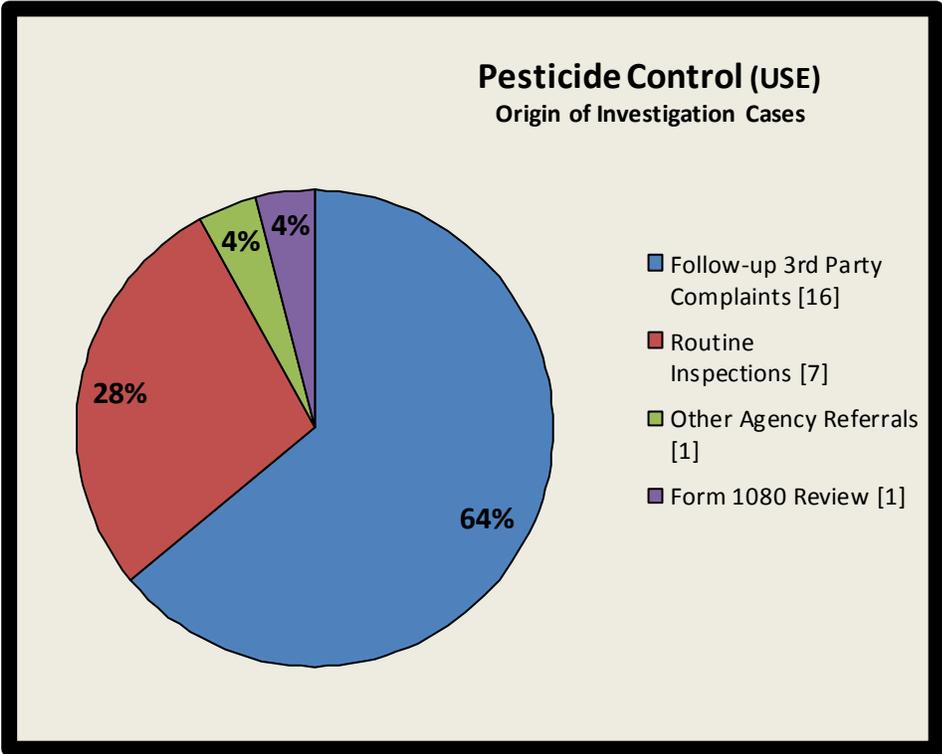
- Dia Del Campesino Health and Information Fair – San Luis, AZ.
- Foothill Packing Foremen / Supervisor Training - Somerton, AZ.
- 2012 Supervisor & Foremen Orientation – San Luis, AZ
- 2012 Annual Safety Meeting – Yuma, AZ

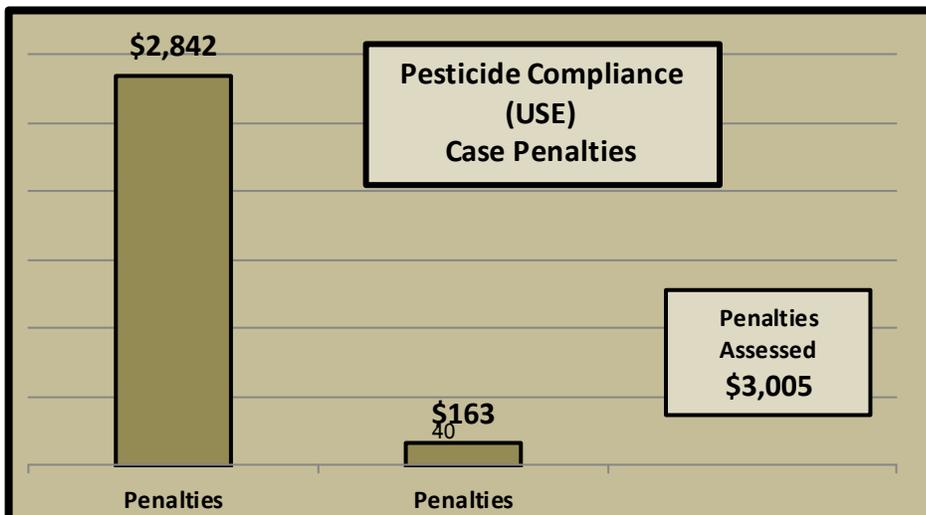
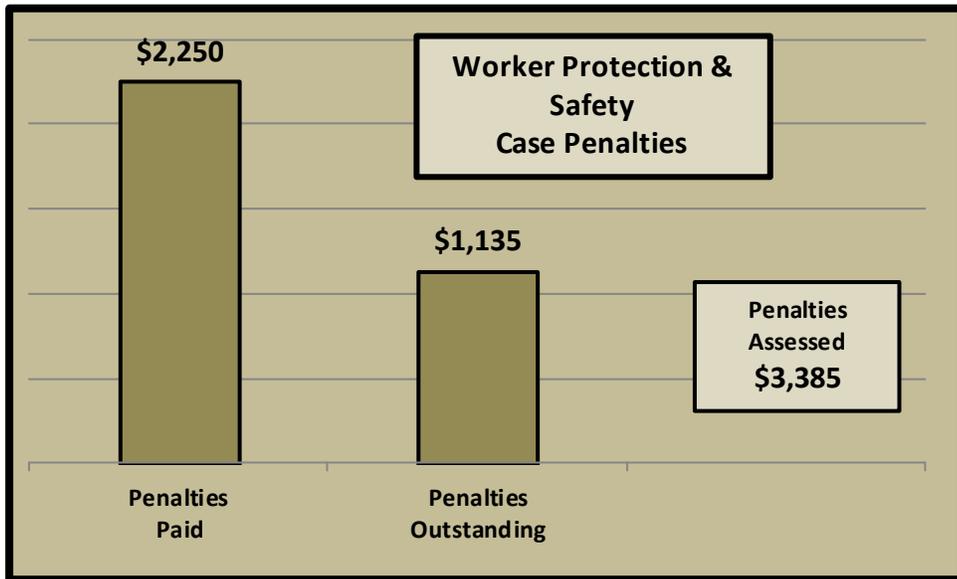
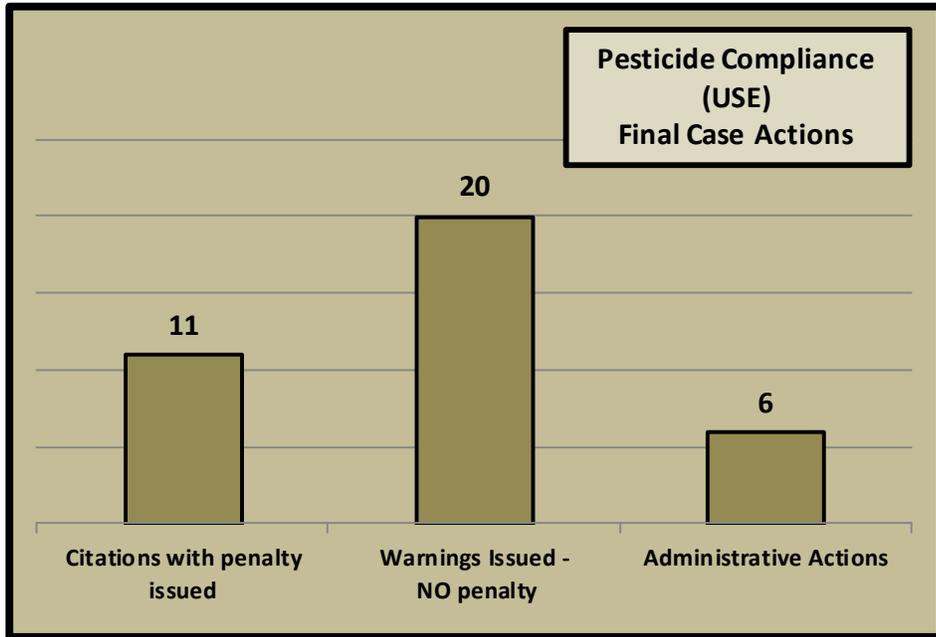
### *Training /Conference Attendance*

ESD Compliance staff attended training/conferences as follows:

- S.E. Arizona Ag Day & Trade Show – Willcox, AZ
- Southwest Ag Summit – Yuma, AZ
- 2013 Desert Ag Conference – Casa Grande, AZ
- Assoc. of Southern Feed, Fertilizer & Pesticide Control Officials – Wilmington, NC
- A New Front Door – Agricultural Temporary Worker Program – Yuma, AZ
- AAFCO Advanced Inspector Training – Traverse City, MI
- Clear NCIT Basic Training – Austin, TX

**There were 14 Worker Protection & Safety investigations, all of which were the result of routine inspections.**





**Pesticide USE & Worker Safety  
Violations Observed**

| <b>Pesticide Control (USE) Violations</b> | <b>Number of Violations</b> |
|---|-----------------------------|
| <b>Container Disposal / Storage</b>       | <b>12</b>                   |
| <b>Drift / Overspray</b>                  | <b>9</b>                    |
| <b>Label Violation</b>                    | <b>9</b>                    |
| <b>1080 Form Violation</b>                | <b>6</b>                    |
| <b>Record Keeping</b>                     | <b>6</b>                    |
| <b>Illegal Sales</b>                      | <b>1</b>                    |
| <b>Operating Without a Valid License</b>  | <b>1</b>                    |

| <b>Worker Safety Violations</b>  | <b>Number of Violations</b> |
|--|-----------------------------|
| <b>Failure to Train</b>  | <b>19</b>                   |
| <b>Failure to Verify Training</b>                                      | <b>5</b>                    |
| <b>Decontamination Site / Supplies not Provided</b>                    | <b>5</b>                    |
| <b>Application List Not Provided / Posted / Incomplete</b>             | <b>5</b>                    |
| <b>Medical Emergency Information not Posted / Missing / Incomplete</b> | <b>5</b>                    |
| <b>Central Posting – Missing / Incomplete - Inaccessible</b>           | <b>4</b>                    |
| <b>Safety Poster not Posted / Illegible / Inaccessible</b>             | <b>2</b>                    |
| <b>Failure to Wear Required Personal Protective (safety) Equipment</b> | <b>1</b>                    |
| <b>Failure to Provide Emergency Transportation</b>                     | <b>1</b>                    |
| <b>Employee Retaliation</b>  | <b>1</b>                    |
| <b>Oral / Written Warnings</b>   | <b>1</b>                    |

# Non-Food Quality Assurance

## Marketplace Inspections and Sampling

| <i>Sample Analysis for 2012 / 2013 SFY</i> |                  |                 |
|--|------------------|-----------------|
| <b>Sample Type</b>                         | <b>Collected</b> | <b>Analyzed</b> |
| <b>Feed</b>                                | 74               | 119             |
| <b>Fertilizer</b>                          | 76               | 238             |
| <b>Water</b>                               | 17               | 32              |
| <b>Pesticide Formulation</b>               | 58               | 89              |
| <b>Pesticide Residue</b>                   | 101              | 226             |
| <b>Seed</b>                                | 99               | 321             |

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

Samples can have numerous analyses.

| Non-Food Quality Enforcement Actions         |          |
|--|----------|
| FERTILIZER                                   | Number   |
| <b>TOTAL NUMBER OF CASES OPENED</b>          | <b>5</b> |
| Routine Inspections                          | 5        |
| <b>NUMBER OF FERTILIZER PENALTIES ISSUED</b> | <b>2</b> |
| Total amount of penalties issued             | \$156.71 |
| Total amount of outstanding penalties        | \$156.71 |
| <b>CEASE &amp; DESIST ORDERS ISSUED</b>      | <b>7</b> |
| Quality Assurance Analysis Failures          | 4        |
| Unlicensed Commercial Fertilizer Company     | 3        |
| <b>WARNINGS ISSUED</b>                       | <b>6</b> |
| Quality Assurance Analysis Failures          | 3        |
| Unlicensed Commercial Fertilizer Company     | 3        |

| <b>COMMERCIAL FEED</b>                  |  | <b>Number</b> |
|---|--|---------------|
| <b>TOTAL NUMBER OF CASES OPENED</b>     |  | <b>6</b>      |
| Routine Inspections                     |  | <b>6</b>      |
| <b>CEASE &amp; DESIST ORDERS ISSUED</b> |  | <b>6</b>      |
| Quality Assurance analysis Failures     |  | <b>2</b>      |
| Unlicensed Commercial Feed Company      |  | <b>4</b>      |
| <b>WARNINGS ISSUED</b>                  |  | <b>3</b>      |
| Unlicensed Commercial Feed Company      |  | <b>2</b>      |
| Quality Assurance Analysis Failures     |  | <b>1</b>      |

| <b>Non-Food Quality Enforcement Actions</b> |  |               |
|---|--|---------------|
| <b>SEED</b>                                 |  | <b>Number</b> |
| <b>TOTAL NUMBER OF CASES OPENED</b>         |  | <b>1</b>      |
| Routine Inspections                         |  | <b>1</b>      |
| <b>CEASE &amp; DESIST ORDERS ISSUED</b>     |  | <b>2</b>      |
| Unlicensed Seed Labeler                     |  | <b>2</b>      |
| <b>WARNINGS ISSUED</b>                      |  | <b>2</b>      |
| Unlicensed Seed Labeler                     |  | <b>2</b>      |

| <b>PESTICIDE</b>                        |  | <b>Number</b> |
|---|--|---------------|
| <b>TOTAL NUMBER OF CASES OPENED</b>     |  | <b>32</b>     |
| Follow-up third-party complaints        |  | <b>10</b>     |
| Routine Inspections                     |  | <b>14</b>     |
| Division Generated                      |  | <b>8</b>      |
| <b>CEASE &amp; DESIST ORDERS ISSUED</b> |  | <b>19</b>     |
| State Unregistered Pesticides           |  | <b>4</b>      |
| Misbranding – False Misleading Labeling |  | <b>15</b>     |
| <b>WARNINGS ISSUED</b>                  |  | <b>7</b>      |
| State & Federal Unregistered Pesticides |  | <b>1</b>      |
| Misbranding                             |  | <b>6</b>      |

Definitions:

Warning/Notice of Violation (NOV) - Warns a manufacturer or distributor of violations related to Feed, Fertilizer, Pesticide, and Seed products offered for sale or distribution in Arizona. Multiple warnings may result in products being removed from sale or distribution, as well as injunctions or seizure of violative products.

Cease and Desist (C&D) - A Cease and Desist is issued when a company fails to come into compliance and requires that the product is removed from sale and distribution in Arizona. C&D Orders remove substandard products from the marketplace for consumer protection.

|  |
|--|
| <p style="text-align: center;">Total Non-Food Quality Enforcement Actions – Fertilizer, Commercial Feed,<br/>Seed and Pesticide:<br/>Cease &amp; Desist Orders Issued: <b>35</b><br/>Warnings / Notice of Violations Issued: <b>18</b></p> |
|--|

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

The division, under a cooperative agreement with the Food and Drug Administration (FDA), conducts inspections of feed manufacturers and dealers, dairies, feed yards, renderers and anyone else associated with animal feed to determine compliance with federal regulations regarding animal feed ingredients fed to ruminants and their potential for human health and safety concerns. During FY2013, the division conducted 34 inspections of facilities in Arizona. The inspections found all facilities were in compliance in keeping prohibited materials out and properly labeling those that can contain certain beef materials.

## *Country of Origin Labeling (COOL)*

For the fourth year, the division worked under a federal cooperative agreement with USDA Agricultural Marketing Service and hired a part-time inspector to conduct inspections under the program. Inspections are conducted at marketplaces, mainly grocery stores, across Arizona checking for compliance with the federal Country of Origin Labeling (COOL) requirements. The COOL regulations apply to fresh and frozen fruits and vegetables, fish and shellfish, beef, veal, pork, goat, and lamb/mutton, chicken, ginseng, and finally peanuts, pecans and macadamia nuts. Products must bear labeling indicating the country of origin for the commodity as defined by the law. Fish and shellfish are also required to be labeled as to whether or not they are wild or farm-raised. We were able to utilize the on-line program for inspection assignment, review and submittal.

## *Arizona Grown*

This year with the availability of specialty crop block money administered by ACT we were able to work with the Arizona Nursery Association and Western Growers to submit an application and receive some funding to continue with the Arizona Grown Facebook page and website. In addition advertisements were purchased to help in promoting Arizona Grown produce and nursery materials.

## *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 6,837 telephone calls, e-mails, letters and visitors in the Phoenix and Tucson offices: 2,109 dealt with native plant issues, 2,011 were livestock related, 46 food safety – illegal animal processing, 5 antiquities inquiries and 2,666 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.



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

A change this year, instead of the AZPOST's compliance division coming to the ADA to review our records for compliance, the Training Coordinator was asked to send copies of our records of training to AZPOST compliance. Our records were reviewed and a letter was sent confirming our compliance with AZPOST standards for the third consecutive year prior to the close of the calendar year.

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.

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

| <b>CERTIFIED OFFICER TRAINING STATUS ~ CY 2012</b>                           |  |  |  |   |   |
|--|--|--|--|---|---|
| <b>Arizona Department of Agriculture</b>                                     |  |  |  |   |   |
| <i>Updated: 1/09/2013 – Austin – OSI – ADA - AZPOST Training Coordinator</i> |  |  |  |   |   |
| <b>Officers</b>  | <b>Total Continuing Education Hours</b>      | <b>Proficiency Training Performed</b>                              | <b>Firearms Qualification Performed</b>                        | <b>Judgmental Qualification Performed</b>             | <b>compliance</b>                         |
| <b>* denotes specialty officer</b>   | <b>AZPOST requirement : 8 hours annually</b> | <b>AZPOST requirement: 8 hours every three years / due in 2014</b> | <b>Minimum: AZPOST approved daytime qual. Course: annually</b> | <b>AZPOST Minimum: three discriminatory scenarios</b> | <b>AZPOST minimum standards completed</b> |
| <b>K. Austin</b>   | <b>24</b>                                    | <b>Passed-2010</b>   | <b>Passed: 12-5</b>  | <b>Passed: 12-5</b>                                   | <b>✓</b>                                  |
| <b>T. Chacon</b>   | <b>47.5</b>                                  | <b>Passed-2010</b>   | <b>Passed: 7-11</b>  | <b>Passed: 7-11</b>                                   | <b>✓</b>                                  |
| <b>R. Christensen</b>  | <b>44</b>                                    | <b>Passed-2010</b>   | <b>Passed: 12-5</b>  | <b>Passed: 12-5</b>                                   | <b>✓</b>                                  |
| <b>D. Drake</b>  | <b>24</b>                                    | <b>Passed-2010</b>   | <b>Passed: 12-5</b>  | <b>Passed: 12-5</b>                                   | <b>✓</b>                                  |
| <b>D. Hale</b>   | <b>14</b>                                    | <b>Passed-2010</b>   | <b>Passed: 12-5</b>  | <b>Passed: 12-5</b>                                   | <b>✓</b>                                  |

|   |             |                    |                     |                     |   |
|---|-------------|--------------------|---------------------|---------------------|---|
| <b>R. Porter</b>  | <b>9</b>    | <b>Passed-2010</b> | <b>Passed:10-24</b> | <b>Passed: 7-11</b> | ✓ |
| <b>*M. Reimer</b>   | <b>31.5</b> | <b>Passed-2010</b> | <b>Passed:10-24</b> | <b>Passed: 12-5</b> | ✓ |
| <b>T. Schultz</b>   | <b>14.5</b> | <b>Passed-2010</b> | <b>Passed: 12-5</b> | <b>Passed: 12-5</b> | ✓ |
| <b>J. Servis</b>  | <b>14.5</b> | <b>Passed-2010</b> | <b>Passed: 12-5</b> | <b>Passed: 12-5</b> | ✓ |
| Officer Certification Records for 2012 were sent to AZPOST on: 02/14/2013 and were found to be in compliance. |             |                    |                     |                     |   |

Two years ago the Department signed onto Arizona's 1033 Program offered by the Department of Defense (DOD) Defense. OSI's Supervisor is the Point of Contact (POI) for the program. The program authorizes the Secretary of Defense to transfer excess Department of Defense property to federal, state and local law enforcement agencies.

There is special consideration provided to law enforcement agencies that are directly involved in counter-drug and counter terrorism activities or in what is termed HIDTA (High Intensity Drug Trafficking Areas). Because Arizona is a border state, illegal drug and weapons activity throughout the state is common place which gives many Arizona law enforcement agencies, including the ADA, special consideration.

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

In FY2011/2012 ADA procured 13 M16A1 rifles. In this past year we were able to obtain ten rifleman sets. The sets are brand new and are what is referred to as MOLLE (pronounced *Molly*) and stands for **MOD**ular **L**ightweight **L**oad carrying **E**quipment.



*Ten piece rifleman set issued to OSI and ASD officers for equip.*

The rifleman sets greatly enhance the officer's survivability if they ever find themselves on their own in the field and have a need water and equipment in one bag.



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.



*Scott Williamson, Special Range, TSWCRA, rifle raffle winner.*

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

There is usually 12 to 16 hours of continuing education training at the seminar. This year, through persistence of our current president, WSLIA was approved for 7 hours of AZPOST credit for the next three years. Also, I applied for and two officers were approved to attend the conference all expenses covered by AZPOST training dollars.

Mike Newman, Supervisory Livestock Officer and Livestock Officer Terry Chacon, both from the Animal Services Division, attended this year's conference.

All of this year's training was excellent and a real eye opener for many of the rural crime officers in the group due to the fact that the number one speaker was former FBI agent Tom Knowles. This former agent was boots on the ground in Kandahar, Afghanistan six weeks after the 9-11 attacks. The nature of his presentation was such that only certified law enforcement were allowed to hear and see his presentation.

Most of the information covered during this session cannot be disclosed due to the sensitive nature. The presentation detailed what is going on today with terrorist drone strikes and the efforts by the current administration to get top leaders in Al Quaida to hopefully cut off the head of the snake in hopes the rest will perish.

Part of the approved AZPOST training was presented by Robert Harris from the Institute of Intergovernmental Research. The training is that which is termed SLATT for State and Local Anti-terrorism Training. Primarily domestic terrorism and the Sovereign Citizen Movement in this country.

Since 2000 the United States has had 31 police officers killed in 22 incidents related to sovereign citizens. There are numerous organizations forming in the US today that claim to be sovereign. One such group, Moorish Nationals, a new group in the black community, are thought to be the new Black Panther party. Lastly, a group that every citizen should be on their guard around is the Christian Identity Church. They have 28 vans registered. They are a violent, group that would be considered crazy by the average person, with absolutely no tolerance for government, police or much of anything else, stay clear.

In July OSI's Supervisor attended the 66th Annual meeting of the International Livestock Identification Association (ILIA) in Rapid City, South Dakota. Arizona is a charter founder of this organization and has maintained continuous memberships. 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.



*Mount Rushmore, Keystone, South Dakota.*

The ILIA is a strong supporter of brands as a legitimate form of identification and encourage legislation that provides for laws regarding inspections of livestock for ownership. An important program within the Environmental Services Division is the livestock brand program which is an integral part of livestock identification in Arizona, and throughout the western United States and Canada.

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. The Arizona Department of Agriculture collects the lowest amount for the inspections performed.

Some examples: Texas, which is the closest State to our fees, collects .60 per head and will be collecting .85 in FY 2013/2014. California currently charges 1.05 and expects to also get a fee increase in the coming year. Most States service charges are at or around \$25.00 minimum unlike Arizona's \$10.00 fee. But many of these State programs are solely funded by the fees collected for their services.

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 528,000,000 people in the United States, Canada and Mexico.

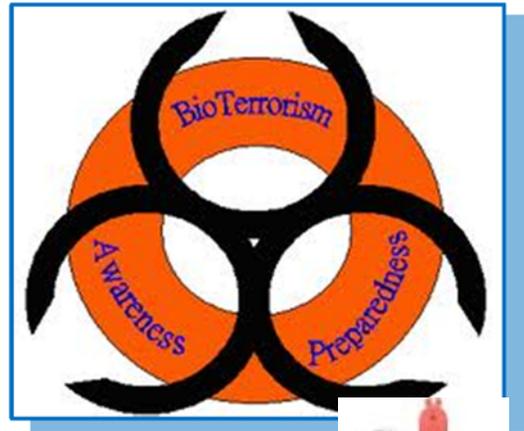
The dues paid in this organization help provide funds to continue a 22 state 4 province network that we can reach out to electronically on livestock theft alerts. With the current pace that a theft ring can move livestock it is important to be able to get the information out on missing livestock in a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



*Young feeder cattle in a feedlot in Texas.*

ILIA brought in Dr. Dustin Oedekoven, the South Dakota State Veterinarian and executive secretary for the South Dakota animal industry board to give us an update on disease traceability and bio-terrorism. Bottom line, we need to remain vigilant and responsible and forever try to gain some continuity in animal identification as it pertains to traceability.

South Dakota requires individual identification for imported animals other than a brand certificate or health certificate. This is going to continue throughout the continent due to the new ADT Framework making it mandatory for interstate movement.



With the requirements in place in South Dakota one can see why they have implemented the law, South Dakota produces enormous numbers of livestock compared with Arizona. For example: they raise approximately 3.7 million cattle, 1.2 million swine and 4.6 million turkeys annually. They also have 36 federally inspected slaughter facilities which require continuous surveillance and an in-depth inspection program to prevent disease and bio-terrorism.



Dr. Oedekoven's presentation was followed by an eye opening presentation from Dr. Barry Dunn, Dean of the College of Agriculture and Biological Sciences at South Dakota State University on the economic and social impact of diseased livestock. Some statistics that came out of Dr. Dunn's presentation that were spellbinding: after the BSE cow was discovered in Washington State in 2003 (it wasn't even a U.S. cow) it caused a 20 billion dollar loss in export dollars to the U.S. beef industry.

In the next forty years we can expect a 50% increase in the world population and we will be expected to produce food on the same land with less water per unit of food production; less energy per unit of food production and on top of this is the mounting social and cultural pressure, i.e. the big push for 'sustainability'.

Here are the statistics on beef production today compared to 1977 in response to the effects of livestock production on the environment:

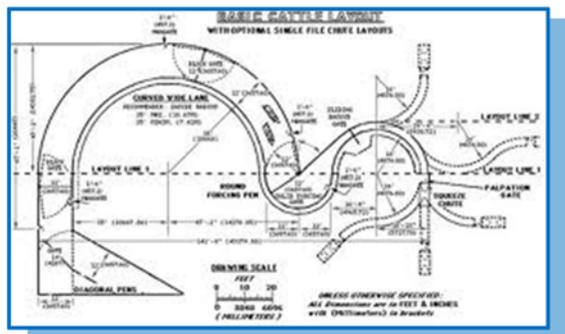
EACH POUND OF BEEF TODAY COMPARED TO 1977 USES:

- 10% less feed energy**
- 20% less feedstuffs**
- 30% less land**
- 14% less water**
- 9% less fossil fuel energy**
- 18% decrease in total carbon emissions (methane, nitrous oxide, and carbon dioxide)**

Lastly, a quote from Dr. Dunn, **"I don't know if the 2012 food system in America is 'sustainable' but history has shown that the 1965 Food System was clearly 'Unsustainable'.**

The highlight of the conference was the presentation from world famous Author and spokeswoman for Autism and livestock movement, Dr. Temple Grandin. She has autism and learned to function by visualizing things, animals are visual thinkers, people with autism are visual thinkers. She put this into a program that builds pens and corrals to avoid scaring animals and allowing them to move without interfering objects, lights, people, etc.

Dr. Grandin is world famous for maintaining calm in animals through her development of chutes and alleys in corrals and pens that do not excite them. Below are some examples of Dr. Grandin's designs.



*Conceptual drawing for basic cattle squeeze layout.*



*Actual design in place and in use.*

At the ILIA conference there is always some training for the law enforcement officers that attend and this conference was no different. We had two presentations: recognizing Bath Salts or more commonly known as synthetic Marijuana and the laws and covert camera operations.

These presentations were given by local law enforcement officers and were excellent. The use of covert cameras in Agriculture is becoming more and more important due to the threat of Bio-terrorism and theft. OSI has used covert cameras effectively in several cases involving the theft of livestock and protected native plants.

### *Enforcement Activity*

There were 45 cases of alleged criminal/civil violations opened involving native plants, livestock and food safety of which 29 resulted in criminal referral. There were 24 native plant cases that resulted in successful compliance. The number of referrals, both criminal and civil, was down approximately 25% 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, ASLD and County Sheriff's offices on several native plant and livestock cases.

Again this year showed a remarkable drop in cattle killing cases similar to what occurred last year. OSI investigated only three suspicious livestock death cases (6 animals). Two cases were deemed inconclusive as to criminal activity. In the third a cow was killed illegally but there are no suspects, witnesses or substantial evidence to move forward. OSI provided ASD officers training in the use of metal detection equipment and they have had some training in necropsy of a livestock animal. In addition, there were several high profile livestock death cases reported in local newspapers over the years that outlined the felony fines and prison sentences for illegal killing of livestock which could also have contributed to the low numbers. Another contributing factor is that when there is enough probable cause for a search warrant, property is routinely seized, in particular firearms and equipment used to commit the crime. The seized evidence is not released back to the suspect(s) until the crime is adjudicated and the defendant or suspect has completed their jail time and probationary period. At this time it is up to them to petition the County Attorney and the court to release all evidence. This sometimes can take years or they may never petition for the return. This could attribute to the low numbers for OSI. Regardless it is all good for Arizona ranchers.

In the Native plant arena there were two cases spotlighted in FY 2011/2012 involving large numbers of saguaro thefts from BLM land and private land that OSI assisted in that were still in adjudication.

This year one individual was sentenced to eight months in prison and fined \$32,000.00. Due to the fact that this is a felony conviction this individual can no longer apply for protected native plant permits or tags for several years.

Saguaro theft in Arizona is a serious problem and we in OSI take it serious.



*OSI photo of salvager holding yard while BLM rangers perform An inventory of saguaros after the service of a warrant.*

### *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 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.

Two years ago a new database system for native plants was implemented. When a new permit is printed the inventory form and declaration page is printed along with the permit and all the necessary information is already on the forms. This has greatly reduced the time it takes to generate the complete packet for the salvager.



*Legal Saguaros at a cactus salvager's staging yard. Note tags.*

The new database defaults to a 30 day period of time for the removal and transportation of the native plants unless the salvager/applicant asks for more time.

There were nine native plant theft investigations opened in FY 2012/0213 of which one was closed as unfounded. The remaining eight are still under investigation.

Two have been concluded but are in the process of case preparation, i.e. photographs, maps, witness statements, etc.

An unfortunate trend OSI is seeing in native plant investigations is an increasing number of 'state' agencies as defined in the Native Plant Law, and private property owners failing to file the required notice of intent to clear land of protected native plants prior to construction. Three of 8 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 five were private property owners. Three closed as unfounded; one a citation was issued and rescinded, and the last one is still under investigation. There are also three cases of protected native plant destruction in the Tucson area that are open and ongoing.

OSI also opened six cases of misuse of permits and tags. Four cases were closed as unfounded, one warning notice was issued and one is still under investigation.

Routinely in Tucson and occasionally in Phoenix, OSI goes to the field to perform a property check to determine if the protected native plants applied for on a particular application exist on the property. This is done only after reviewing available on-line resources and we are unable to view the property in a clear, aerial photograph in a GIS format.



*OSI photograph of property review showing ample saguaros.*

OSI considers some property reviews as an investigation primarily because the fact remains if we discover that there are not as many plants as the person applied for then that person falsified a public document and could be subject to a citation and further investigation.

Thirteen property review investigation were opened for extenuating circumstances. Two in Phoenix and eleven in Tucson. The OSI investigator in Tucson also performed sixty-one additional property

reviews that were not opened as an investigation but were done as a part of routine permitted property checks.

Three of the investigations revealed that the permittee/applicant was not given the amount of tags for the removal and transportation of protected plants as applied for due to the fact that the plants were not there. As a result the permittee/applicant was warned and will also be scrutinized more closely when applying for permits and tags in the future.

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 211 such requests in FY 2012/2013 which is double from last year.

### *Livestock Investigations*

OSI is called upon by the Officers and Inspectors of the Animal Services Division to formulate and send out all points bulletins (APB) on missing or stolen livestock. OSI sent out thirteen APB's in FY 2012/2013 involving 156 missing cattle, 3 horses, 2 ponies and 11 goats. Of the missing livestock, only the two ponies were reported to OSI as recovered. It was determined that 108 of the cattle reported missing was an unfounded report. The remaining missing livestock on the APB's are considered stolen and a theft investigation opened.



*Some of the missing goats are similar to the one shown above.*

OSI opened or assisted ASD on 6 Livestock theft investigations. There are four horses and three cattle in the reports. Three cases are horse thefts, only one remains open.

Of the three cases involving cattle all remain open. Each case is one animal. One is a dairy calf that most likely will not be recovered and there is no witnesses coming forward or evidence at the scene. Another is a missing cow that was reported killed illegally but that report was unfounded and the case is now stolen livestock. There is no evidence to move forward on this case and no one has come forward to talk about the cow. The last case involves two individuals photographed gathering maverick cattle off of the Salt River near the Salt River Pima-Maricopa Indian reservation. The photographs taken by the witness show the men releasing the maverick but OSI learned that another animal was in their trailer. OSI has been unable to locate that animal and the suspects are refusing to talk.



*Cowboy with maverick heifer later turned loose.*

A policy regarding OSI was signed by Director which spells out the procedure for asking OSI for investigation assistance. The policy is only a couple of paragraphs in length. This policy was put in place primarily in response to the Auditor General's report regarding the reporting process. The

process requires a request for investigation be made by a supervisor or above through the AIRS reporting system and/or a formal request in writing on a form provided by OSI. There has been only one request made in FY 2012/2013.

Finally, OSI assisted in two internal investigations. Both of which have been closed. One was closed with the investigations concluded with the recovery of State property and the other was closed for lack of response from the complainant after numerous attempts to get more information.

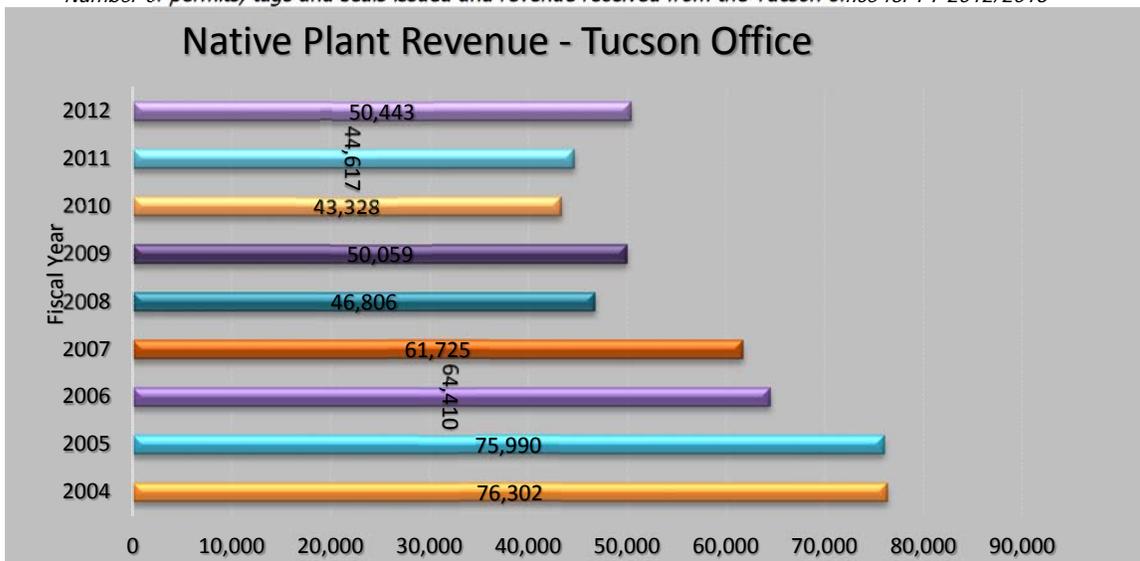
### OSI Administrative Statistics

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

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

| NATIVE PLANTS                    |              |              |             |             |
|----------------------------------|--------------|--------------|-------------|-------------|
| Permits, Tags, Seals and Revenue |              |              |             |             |
| No. of Permits                   | Saguaro Tags | Regular Tags | Green Seals | Total Fees  |
| 353                              | 3,197        | 5,894        | 11,523      | \$50,442.95 |

*Number of permits, tags and seals issued and revenue received from the Tucson office for FY 2012/2013*



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

The chart above is a demonstration of an improving economy with a \$6,000.00 increase in permits and tags sold out of the Tucson office. They are still not back up to where they were prior to the housing market crash but there is definitely improvement. Initially OSI was tracking to see if the implementation of the inventory form was creating the down turn or the economy. When comparing permit and tag sales from month to month and year to year it was evident that the economy is having the most effect. With more new home construction projects in the State there is a gradual need for desert landscapes which generally call for native plants.

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, destroyed illegally. There is nothing more majestic on any place on this planet than a saguaro cactus.



## Office of Pest Management

This was another significant year for the OPM. The task force that was set up in the 2011 Legislative session submitted its final report to Governor Brewer and the legislature in October. The legislature took this report and the associated draft legislative package and put it into SB 1290. This bill passed both the Senate and House with overwhelming support. Thanks goes to both the structural industry and the agriculture industry for helping to get this through the legislative process. The bill put the OPM under the leadership of the ADA Director permanently, it changed the funding mechanism, and it provided a general structure to allow the OPM to adopt through exempt rulemaking the rules to give the general laws adopted the clarity needed.

### *Staff Allocations*

The OPM has allocated 30 full-time employee positions with 19 of them being filled as of June 30, 2013. 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 FY2013 | No. of Licensees end of FY2013 |
|-------------------------|---------------------|--------------|----------------|---|--------------------------------|
| Applicator              | 8464                | 922          | 7724           | 740                                     | 6917                           |
| Qualifying Party        | 1735                | 104*         | 1593           | 142                                     | 1564                           |
| Business                | 1226                | 90           | 1209           | 17                                      | 1195                           |
| Branch Office           | 105                 | 10           | 105            | 0                                       | 100                            |

The Office of Pest Management (OPM) has an internet based license renewal system – RenewEZ; which processed 79% of all renewals received in FY2013. The OPM also fingerprinted 123 applicants for background investigations and held 3 Applicant Review Committee hearings for applicants with criminal convictions that resulted in 2 approvals and 1 denial. The business and qualifying party (QP) license renewals occur from November 1 through January 30<sup>th</sup>. The applicator license renewals occur April 1 through June 30<sup>th</sup>.

## OPM Testing

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

The following table shows the total number of exams administered over the last 10 fiscal years.

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

## OPM Exams Administered in FY 2013

| License Type | Exams      | Total Exams | Percent Passed | Average Passing Score | Average Failing Score | Average Attempts |
|--------------|------------|-------------|----------------|-----------------------|-----------------------|------------------|
| Applicator   | Core       | 1590        | 70.5%          | 84.5%                 | 66.2%                 | 1.4              |
| Applicator   | Aquatics   | 24          | 70.8%          | 83.5%                 | 69.6%                 | 1.4              |
| Applicator   | Fumigation | 57          | 49.1%          | 80.4%                 | 66.9%                 | 2.0              |

| License Type     | Exams                             | Total Exams | Percent Passed | Average Passing Score | Average Failing Score | Average Attempts |
|------------------|-----------------------------------|-------------|----------------|-----------------------|-----------------------|------------------|
| Applicator       | Fungi Inspection                  | 1           | 0.0%           | n/a                   | 52.9%                 | 1                |
| Applicator       | General & Public Health           | 1199        | 57.8%          | 83.3%                 | 68.0%                 | 1.8              |
| Applicator       | Turf & Ornamental                 | 310         | 52.9%          | 82.7%                 | 63.7%                 | 1.8              |
| Applicator       | Wood-Destroying Insect Inspection | 504         | 64.7%          | 81.4%                 | 67.1%                 | 1.6              |
| Applicator       | Wood-Destroying Insect Management | 563         | 61.1%          | 83.5%                 | 65.0%                 | 1.7              |
| Applicator       | Right of Way & Weed               | 686         | 57.3%          | 83.1%                 | 64.4%                 | 1.7              |
| Qualifying Party | Core                              | 196         | 50.5%          | 80.5%                 | 66.7%                 | 2.1              |
| Qualifying Party | Aquatics                          | 1           | 100%           | 85.0%                 | n/a                   | 1.0              |
| Qualifying Party | Fumigation                        | 2           | 50%            | 73.6%                 | 6.25%                 | 1.0              |
| Qualifying Party | Fungi Inspection                  | 0           | n/a            | n/a                   | n/a                   | n/a              |
| Qualifying Party | General & Public Health           | 110         | 65.5%          | 83.9%                 | 68.3%                 | 1.5              |
| Qualifying Party | Turf & Ornamental                 | 10          | 90.0%          | 84.5%                 | 66.3%                 | 1.0              |
| Qualifying Party | Wood-Destroying Insect Inspection | 46          | 63.0%          | 80.0%                 | 69.1%                 | 1.7              |
| Qualifying Party | Wood-Destroying Insect Management | 52          | 50.0%          | 80.0%                 | 65.9%                 | 1.8              |
| Qualifying Party | Right of Way & Weed               | 37          | 73%            | 85.9%                 | 68.0%                 | 1.4              |
| <b>TOTALS</b>    |                                   | <b>5390</b> | <b>60.4%</b>   | <b>82.4%</b>          | <b>65.7%</b>          | <b>1.5</b>       |

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

## *Compliance Section*

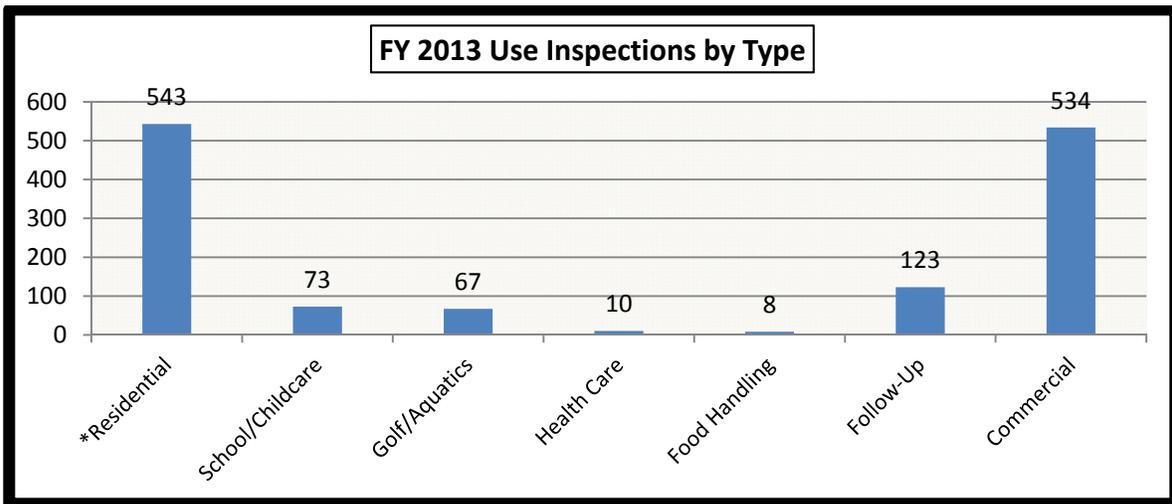
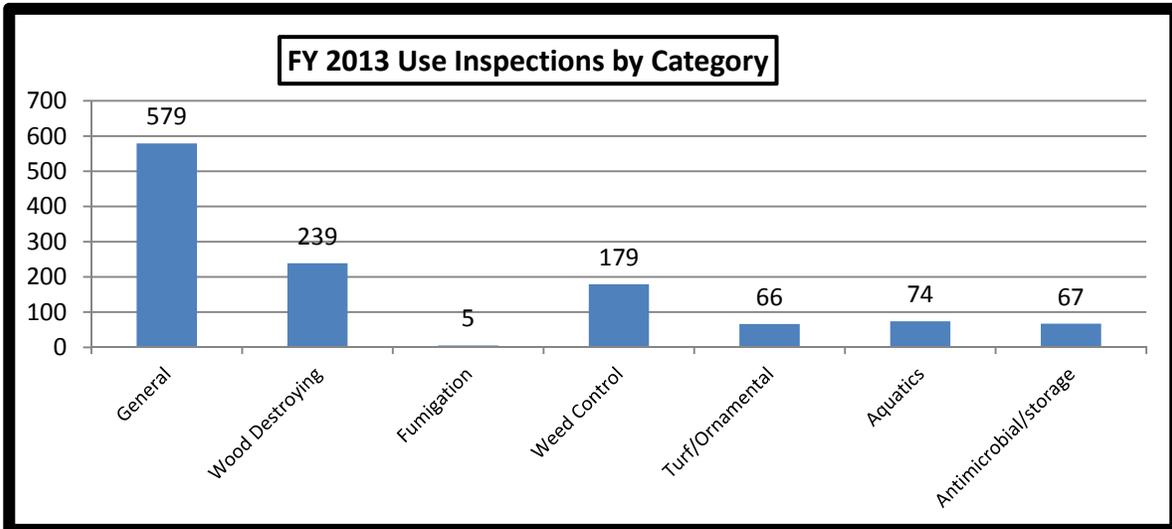
### *Inspections*

#### *Pesticide Use inspections*

One of the goals of the Office of Pest Management (Office) Compliance Section is to protect the public by taking steps to reduce the incidence of pesticide misuse. The Office accomplishes this goal by conducting field inspections of applicators engaged in the application, storage, and disposal of pesticides.

The Office's six compliance inspectors performed 1,196 pesticide use inspections which encompass all categories for which the Office issues licenses and in many different settings, including residential, food-handling, schools, childcare facilities, golf courses, and health care facilities.

The charts below detail the number and type of inspections conducted as well as the type of inspection.



### *Pesticide Records and Storage Inspections*

Ill-maintained pesticide storage areas and malfunctioning pesticide application equipment pose potential dangers to the environment as well as to those that work in or around them on a daily basis. Regular inspections of these storage locations and application equipment ensure that licensees remain diligent in maintaining them free from hazards and in good working order. The Offices' inspection data continues to demonstrate that a proactive inspection program provides positive results.

### *Pretreatment monitoring*

The Office continues to observe new home and commercial construction in most parts of the State. Inspectors utilize follow-up inspections, also known as "Consumer Protection Monitors (or CPMs)", to determine if consumers received a termite pretreatment that complies with state and federal requirements. This monitoring program does (not) disrupt the work schedule of a business, qualifying party or applicator, as it does not involve interaction with them, unless a violation is found. Rather,

the inspector, visits newly constructed sites and views the pretreatment tag the applicator is required to attach to the site, after completing the pretreatment. Then, the inspector measures the site, calculates the amount of termiticide that should have been applied, and compares his findings with the information reported on the tag. The inspector uses the pretreat tag to not only verify the proper quantity, strength, and dosage, of termiticide to a site, but also to determine if the business engaged in the termite control market is reporting the treatments to the Office as required by Law. In FY 2013, OPM inspectors performed 152 Consumer Protection Monitors.

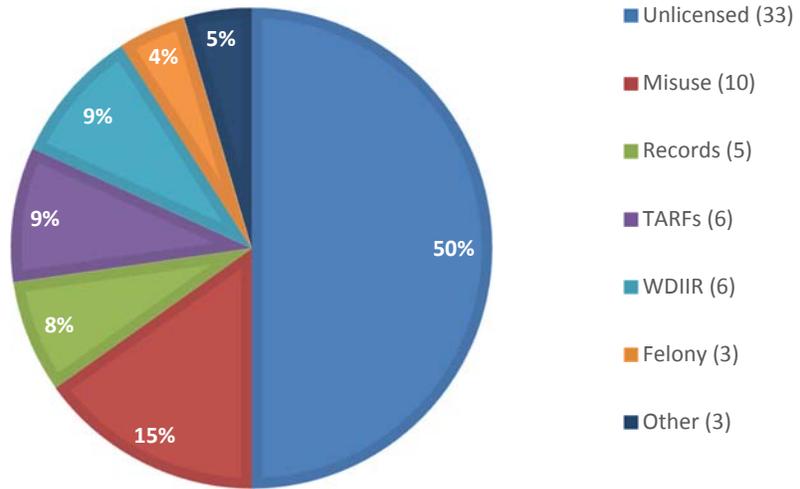
### *Investigations*

The Office conducted 151 inquiry investigations in FY 2013 with approximately 43% of these becoming formal complaints. The Office obtains information that leads to an inquiry investigation from a number of sources. The sources of investigations include consumers, licensees, agency Staff, or referrals from the USEPA or other State or local government agencies. The Office investigates any allegation for which it has jurisdiction. This year 52% of inquiry investigations originated from allegations of pesticide misuse or unlicensed activity (47 unlicensed cases and 32 misuse cases). The 57% of investigations that never proceeded beyond the inquiry phase were cases where the OPM did not have jurisdiction, where no violations were substantiated, or where the violations were minor in nature and did not merit a formal complaint. Many of these were adjudicated by other means, including compliance assistance (CA) or corrective work orders (CWO's). The chart below details the *adjudicated* cases, type of allegation and its originating source.

| <b><u>Allegation</u></b>                      | <b>Consumer</b> | <b>OPM</b> | <b>Other</b> | <b>Totals</b> |
|---|-----------------|------------|--------------|---------------|
| Pesticide Misuse                              | 6               | 4          | 0            | <b>10</b>     |
| WDIIR   | 6               | 0          | 0            | <b>6</b>      |
| Unlicensed Business                           | 16              | 15         | 2            | <b>33</b>     |
| TARF  | 6               | 0          | 0            | <b>6</b>      |
| Recordkeeping (not TARF)                      | 1               | 4          | 0            | <b>5</b>      |
| Failure to treat (3 <sup>rd</sup> occ. or FG) | 1               | 0          | 0            | <b>1</b>      |
| Felony (fail to disclose conviction)          | 0               | 3          | 0            | <b>3</b>      |
| CWO (failure to comply)                       | 0               | 1          | 0            | <b>2</b>      |
|   |                 |            |              |               |
| <b>Totals</b>                                 | <b>36</b>       | <b>27</b>  | <b>2</b>     | <b>66</b>     |

*Other includes licensees and referrals from other government agencies*

## OPM INVESTIGATIONS FOR FY2013



*Other includes failure to comply with an order, failure to perform final grade, and 3<sup>rd</sup> occurrence violation*

### *Complaints and the Complaint Database*

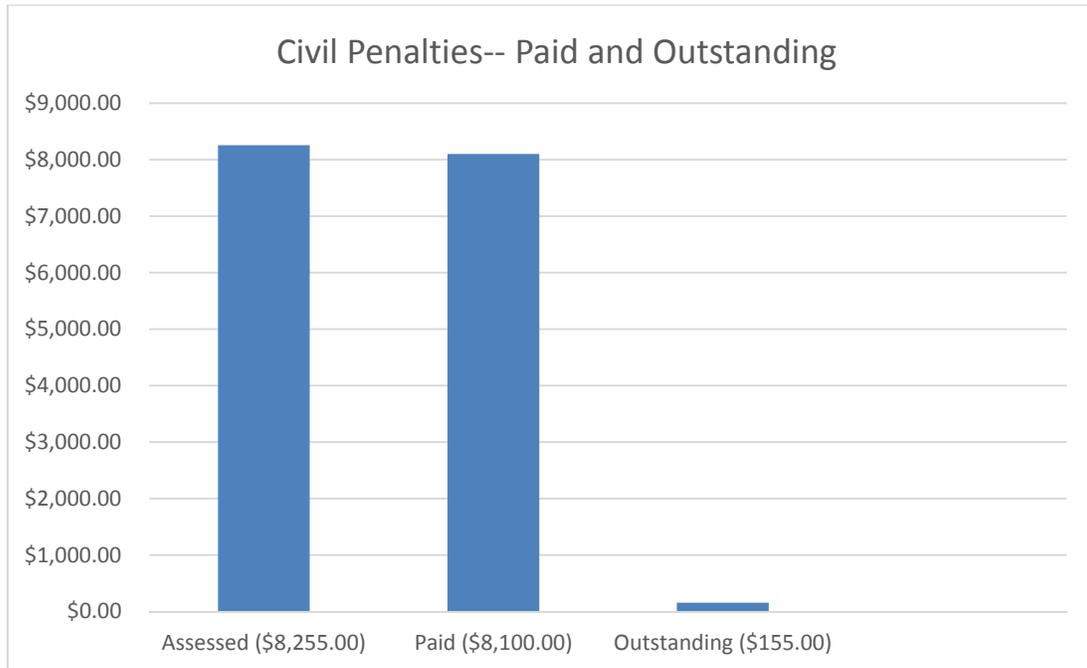
The OPM issues a citation only after the Compliance Manager, Attorney and Acting Director have conducted a thorough review of the investigative report and have determined that a violation meriting disciplinary action has occurred. To maintain consistency, the Compliance Manager utilizes an Enforcement Response Policy (ERP), which takes into account case specific factors, and provides guidance in the determination of the appropriate disciplinary action. Penalties may include, administrative warnings, civil penalties of up to \$1000, or license suspension/revocation for the most egregious violations. In FY 2013 the OPM issued discipline in 66 cases, 48 were filed in in FY2013 and the remainder originated from the prior fiscal year.

Consumers can visit <http://www.sb.state.az.us/ComplaintSearch.php> and view the complaint history of any respondent whom the OPM has opened and adjudicated a complaint. The database can retrieve the record via case number, license number or the respondent's name. If one simply desired to view all of the records for a specific period, one could simply input the "from date" and "to date" to retrieve those records for that time block as well as view the Citations and Consent Agreements in Adobe Acrobat format. These documents provide a brief description of the facts as well as the discipline rendered, which may include any of the following.

| <u>Type of Disciplinary Action</u> | <u>Number</u>  |
|------------------------------------|----------------|
| <b>Administrative Warnings</b>     | <b>63</b>      |
| <b>Civil Penalties</b>             | <b>\$8,255</b> |
| <b>License Suspensions</b>         | <b>3</b>       |

|                                 |           |
|---------------------------------|-----------|
| <b>License Revocations</b>      | <b>4</b>  |
| <b>Dismissals</b>               | <b>8</b>  |
| <b>Conditions w/o probation</b> | <b>11</b> |
| <b>Notices of Correction</b>    | <b>1</b>  |
| <b>Cease and Desist Orders</b>  | <b>16</b> |

Cases often include more than 1 type of disciplinary action.



## Industry training and outreach

### *Initial Licensing Training (ILT)*

ILT is a long standing program designed to assist entrants into the field of structural pest control in preparing for Arizona's applicator licensing exam. The program supplements the written study materials and covers topics in safety, pesticide labels, laws and regulations, as well as pest biology. In FY2012 compliance staff provided ILT classes in Phoenix (53), Tucson (49), and Yuma (23) for a total of 125 people.

### *Continuing Education (CE)*

Individuals holding licenses issued by the Office are required to obtain 6-hours of CE per year prior to the expiration of the license, which (currently) occurs at the end of December for Qualifying Party license holders or May for Applicator license holders. There are numerous entities that offer "for fee" CE to licenses, including the OPM. The Office believes it has a place in providing CE, especially as it relates to updating licensees on new or pending regulation. The Office also understands there are others more appropriately qualified to educate industry members in new pesticide technologies, equipment, application techniques, and business practices. It is with this understanding and after

requests from the private CE industry that the OPM scaled back its CE offerings each year. The Office anticipates that it will continue to offer CE to licensees in the future especially as new regulations come about. The office approved 419 out of 463 courses submitted for a total of 827 CE hours. In FY2013 compliance staff provided CE classes in Phoenix (63), Tucson (31), Yuma (23) and Prescott (44) to 161 people. Additional compliance assistance and outreach that the OPM was involved with:

| <u>Date</u>       | <u>Location</u>      | <u>Number of Attendees</u> |
|-------------------|----------------------|----------------------------|
| October 17, 2012  | Record Keeping       | 8                          |
| October 31, 2012  | Laws and Rules       | 9                          |
| January 18, 2013  | Safety and Labels    | 3                          |
| February 19, 2013 | Laws and Rules       | 150                        |
| February 20, 2013 | Laws and Rules       | 300                        |
| February 21, 2013 | Laws and Rules       | 150                        |
| March 7, 2013     | WDIIR                | 3                          |
| April 5, 2013     | Laws and Rules       | 50                         |
| April 10, 2013    | Laws and Rules       | 71                         |
| April 29, 2013    | Laws and Rules       | 100                        |
| April 30, 2013    | Laws and Rules       | 75                         |
| April 30, 2013    | Pretreats            | 3                          |
| May 7, 2013       | Laws and Rules       | 125                        |
| May 15, 2013      | Laws and Rules       | 7                          |
| May 16, 2013      | Laws and Rules       | 30                         |
| May 17, 2013      | Laws and Rules       | 1                          |
| May 21, 2013      | Laws and Rules       | 10                         |
| June 25, 2013     | BL, QP and App Resp. | 7                          |
| June 25, 2013     | Laws and Rules       | 7                          |

### *Compliance Assistance*

Compliance is our number one priority so very often assistance (CA) is offered in lieu of a formal complaint in cases where a violation occurred but was not egregious, it caused no human or environmental harm, and where more benefit is derived from the CA than there otherwise would be with the issuance of a penalty.

### *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 132 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. During FY2012, OPM inspectors noted several violations regarding a failure to provide such notifications, which resulted in 74 licensees receiving training. However, OPM inspectors noted no such violations during FY2013. This is no doubt due to regular compliance assistance provided by the OPM Compliance Department.

### *Inspector on Duty (IOD)*

The OPM maintains a toll free phone number (1-800-223-0618) that provides the public with an easy way to report pesticide misuse, unlicensed activity, or to ask one of the Office's compliance inspector's questions. Inspectors are assigned, on a rotating basis, to answer these phone calls from

8:00 a.m. to 5:00 p.m., Monday thru Friday. Messages left over the weekend are disseminated to the "On Duty" inspector by 8:00 a.m. the following Monday.

## Plant Services Division (PSD)

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

### Pest Exclusion and Management

#### *Increased Threat of Pests*

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

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

As a result of the 2009 detection of ACP in Yuma County, the Plant Services Division intensified its detection activities for this pest and the disease it can carry. Vigilant detection activities are presently in place across the state, focusing on commercial citrus, high risk residential citrus areas, as well as providers of citrus nursery stock. The Division quickly responded by implementing a response program and a plant quarantine on host commodities in an effort to reduce the risk for the pest to spread to other areas of the state and to protect the export capabilities for commercial citrus fruit. These activities, accomplished in concert with industry and public outreach, increase the probability of the early detection of ACP infestations and the mitigation of potential damage which could occur if adequate safeguarding measures were not in place. Coordination between state and federal agencies and stakeholder partners is an imperative key to limit the ability for this pest to spread and to ensure Arizona can maintain a viable foothold in the citrus fruit and citrus nursery stock markets.

Even with multiple safeguarding measures in place, the risk of introducing the pest to other areas of the state is significant. With the trade of commerce that can harbor the pest, the increase of detections in neighboring states and countries, and the illegal movement of infested plants from one area to another, are factors in making it increasingly difficult to exclude the pest from areas that are free from ACP. Early 2013 indicated a significant increase in detections of ACP in several areas of the state - Lake Havasu City, Bullhead City, Yuma, and more. From October of 2009 to December of 2012, ADA and USDA inspectors had intercepted ACP at only 17 sites in Arizona. Between January 1 and June 30, 2013, 83 sites were detected with the pest; a majority of those in cities along the Colorado River. Quarantine boundaries were expanded on May 6, 2013 to include all of Mohave County, the northern portion of La Paz County, and a larger portion of Yuma County in order to limit the movement of potentially infested plant material to other areas of the state. Even with the increased numbers of ACP detected in the State, the ADA has not detected Citrus Greening disease and ACP numbers are still far less than other neighboring states. Maintaining a

viable front to limit the expansion of ACP and responding to new detections will be vital in protecting Arizona's citrus from this potentially devastating disease.

## *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*

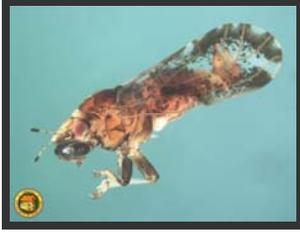
Arizona continues to enjoy freedom from numerous exotic pests that have cost infested states millions of dollars in attempted control or eradication. Through efforts to exclude, detect and mitigate exotic species establishment, the Arizona Department of Agriculture protects the quality of Arizona life and market access for our agricultural commodities produced here.

## *Arizona's Most Unwanted Pests*

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



**HLB infected and healthy citrus leaves -**  
University of Florida



**Asian citrus psyllid adult –**  
ADA-PSD

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

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



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



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

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



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



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

- South American/Red Palm Weevil** – The South American and Red Palm Weevils are pests of major concern due to the Red Ring Nematode that the weevil can carry and spread to healthy palms which can cause 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. The US Domestic Japanese Beetle Harmonization Plan aids in preventing the interstate spread of this pest on nursery stock. Federal rule regulates the movement of aircraft departing from infested areas.



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



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



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

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



**Gypsy Moth Larvae** - USDA  
Forest Service



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

- **Fruit Flies**

(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

## *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 2013, inspection staff intercepted 13,907 pests within the state's interior through various inspections; 3,417 of those pests intercepted were submitted for identification, 176 of the pests intercepted were identified as pests of concern; 1,003 federal phytosanitary certificates were issued for the export of vegetable, agricultural, and ornamental seed, produce, nursery stock, wood products, and various other agricultural commodities. Pre-clearance of plants for pests, most notably citrus stock, before distribution within the State is a major inspection task.

## *Biological Identification Group*



**Digital imaging system -  
ADA-PSD**

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

## *Survey and Detection*

The early detection of potential pests and delimiting surveys of pest infestations through trapping and surveillance programs for a wide range of pests is the final safety net in the division's pest interception effort. This is a highly important component of our agricultural safeguarding system. Realistic trap densities are one aspect of this system that may fluctuate within certain geographical area based on certain risk factors. The main risk factors are:

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

All of these risk factors must be taken 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.

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

Statewide, an average of 10,502 traps were placed, serviced and monitored throughout FY 2013 for up to 14 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 Arizona Department of Agriculture's commitment to protect Arizona industries.

### *Fruit Fly*

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



**Fruit Fly adults –**  
FDACS-DPI

The division's exotic fruit fly detection efforts involves monitoring an average of 2884 traps placed statewide and currently meets or exceeds the Federal trapping protocols.

In FY 2013, 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. High-risk locations, such as RV parks, are routinely trapped.

## Asian Citrus Psyllid/Citrus Greening

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



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

## European Corn Borer

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



European Corn Borer  
Larvae - Keith Weller,  
USDA-ARS

## Japanese Beetle



Japanese Beetle  
Adult- Stephen  
Ausmus, USDA-ARS

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

## Commitment to Service

The Plant Services Division continues its efforts to improve timeliness and quality of customer service delivery and even though faced with the continued impact of budget reductions, reduced inspection staff as well as numerous other pest challenges, PSD has demonstrated its commitment to service by the following:

## Export Certification

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

- **Domestic shipments of nursery stock**

In FY 2013, inspectors issued 1,223 single shipment certificates for shipments of agricultural commodities to other states. Nursery stock accounted for 122 certificates.

- **Voluntary nursery inspection certification program**

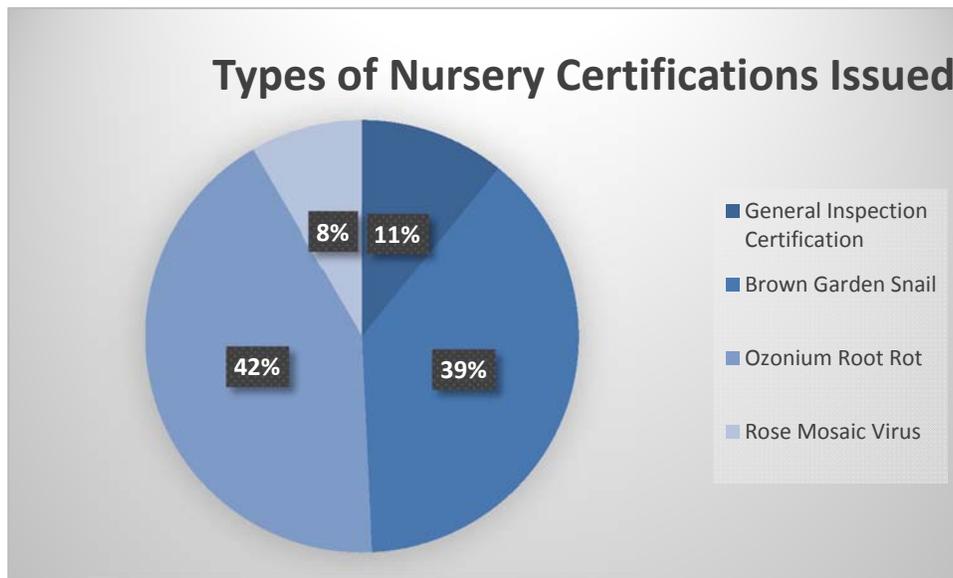


**Nursery inspection - ADA-PSD**

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

The Division processed 300 applications during calendar year 2012 from Arizona nurseries requesting certification to comply with the entry requirements of other states, and issued 203 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 |

## Cooperative Effort

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

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

At the beginning of FY 2013, 14 Weed Management Areas (WMA's) were actively pursuing control or eradication goals, mapping local weed distributions and conducting public information programs in Arizona.

### *Noxious Weeds for Sale*

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



**Morning Glory** – Billy Craft

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



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

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