

Mission :

To support and promote Arizona agriculture in a way that encourages farming, ranching and agri-business, protects the well-being of people, plants, animals and the environment while safeguarding commerce, consumers and natural resources



**ARIZONA
DEPARTMENT OF AGRICULTURE
ANNUAL REPORT**

FY2019

Table of Contents

| | |
|--|----|
| Letter from the Director | 0 |
| Summary | 1 |
| Agricultural Consultation & Training | 4 |
| Animal Services Division | 16 |
| Citrus, Fruit & Vegetable Division | 26 |
| Environmental Services Division | 30 |
| Pest Management Division | 40 |
| Plant Services Division | 43 |
| State Agricultural Laboratory | 48 |
| Weights and Measures Services Division | 47 |

DOUGLAS A. DUCEY
Governor



MARK W. KILLIAN
Director

Arizona Department of Agriculture

Office of the Director
1688 W. Adams Street, Phoenix, Arizona 85007
(602) 542-0990 FAX (602) 542-5420

September 30, 2019

Honorable Douglas A. Ducey
Governor, State of Arizona
1700 W. Washington Street
Phoenix, AZ 85007

Dear Governor Ducey:

We are pleased to present to you the Arizona Department of Agriculture's Annual Report for Fiscal Year 2019. We will continue to strive for excellence and to work diligently to enhance our customer service initiatives with a constant goal to be recognized as a world class organization and the best Agriculture Department in the country.

The Department has a long-standing history of working to protect public health and safety as well as safeguarding consumers and Arizona agriculture, which feeds the citizens of this great state, the entire nation and the world. These vital efforts will continue to be reflected in our Strategic Plan, our mission and our vision.

Moving into FY 2020, we will continue to work closely with our customers and stakeholders to ensure that we are responsive to their needs. This December we are co-hosting the 5th Annual Agribusiness Roundtable, Let's Talk Solutions. The importance of agriculture and its contributions to the citizens and to this state is apparent. Agriculture has been estimated at being a \$23.3B industry resulting in the creation of 138,000 jobs in our great state.

We always strive to become more effective and revise our Agency Scorecard to reflect our core business processes, and goals. We will continue to utilize these metrics to assist us in making key decisions and in staying laser-focused on these vital processes and goals. On a daily basis, we challenge ourselves to improve our efficiency and our processes so we can provide government at the speed of business.

Furthermore, we will remain dedicated to work closely with all of our industry sectors to help us in implementing our long-range five year plan for the Department. Not only are we providing industry with excellent customer service, but it is important we continue a path of excellence through long-range planning.

Governor, we will continue to look forward to working with you on issues important to Arizona's agriculture community as we continue to strive for quality in all that we do.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark W. Killian", written over a horizontal line.

Mark W. Killian Director

st:mk



As the Arizona Department of Agriculture (AZDA) completes its 28th year as an agency, the AZDA has a mission, "to support and promote Arizona agriculture in a way that encourages farming, ranching and agribusiness, protects the

well-being of people, plants, animals and the environment while safeguarding commerce, consumers and natural resources."

The AZDA was created in 1991 and sought to bring together various boards and commissions and all aspects of agriculture under one roof, using the fewest regulations possible while improving customer service, enhancing protection of the public, consumers and natural resources. Additionally, the AZDA was tasked



with assisting producers in raising the best crops and herds, educating the public about Arizona agriculture and increasing the demand for our commodities.

Throughout FY 2019, Director Killian has attended numerous industry and representative meetings to talk about the AZDA and its eight main divisions/programs and to solicit feedback from its customers and the public. Four strategic planning meetings were held to receive direct input about how the AZDA is doing and how it could improve.

Attendees identified top priorities as the following: (1) AZDA's need for more staff; (2) increasing staff salaries; (3) the need to promote agriculture more; (4) the timely filling of ADA Advisory Council vacancies; (5) improving AZDA's social media presence; (6) having adequate funding for the State Agriculture Laboratory and (7) agriculture's need to maintain a strong and reliable work force. People should understand and recognize the magnitude of Agriculture's impact on the Arizona economy - \$23.3 and more than 138,000 jobs.

The AZDA is still focusing on enhancing our customer service and helping clients understand the need for certain regulations and how to comply with such regulations. The AZDA continues to review all regulations to make sure they are still necessary. This past year, through this ongoing process the AZDA has already updated 21 rules.



The agribusiness community encompasses more than farms and ranches; it includes packers, processors, shippers, equipment, water delivery systems, finance and other support industries. To further highlight the economic impact of agriculture in the state, and offer current information and networking opportunities to Arizona agriculture professionals, the AZDA, in collaboration with the Arizona Agribusiness & Water Council, hosted its fourth Annual Arizona Agribusiness Roundtable, *What is the Future of Agriculture? The Good, the Bad & the Unknown*, on December 10th. At the inaugural event in 2015 Governor Doug Ducey spoke to

more than 200 people representing a broad spectrum of businesses involved in agriculture. We anticipate approximately 300 attendees at the fifth annual conference, *Let's Talk Solutions*, scheduled for December 2, 2019.

Diversity is key to Arizona's agriculture stability from year to year. However industry always faces challenges. The AZDA continually assists industry in addressing these challenges.



Education is also an important task of the AZDA. Although agriculture is vital in that it provides our food supply and is a large contributor to the economy, it also provides open space, wildlife habitat and efforts to protect and conserve our natural resources.

Several divisions/programs of the AZDA work together to ensure Arizona's food supply is safe, commodities are pest-free and workers are protected, in addition to checking that pesticides are applied correctly and according to federal safety regulations.

Arizona is the 3rd largest producing state for fresh market vegetables, and it is 4th in the country in acres of organic vegetables. Arizona agriculture produces more than 99 million cartons of fresh produce. Arizona growers export tons of plants, seeds, nuts, vegetables and livestock feed to over 70 countries around the world. The agriculture industry is growing in Arizona as more producers see the benefits of the weather and the business climate.

Arizona's livestock industry covers beef, lamb, mutton, egg and dairy production. In 2018, Arizona farmers and ranchers produced 468.1M pounds of red meat. Dairies and dairy farmers produce one of the state's top commodities--with 4.98B pounds of milk from 205,000 cows.

AZDA staff works with industry to make sure food-borne bacteria and viruses are not present from the beginning of the inspection process until it reaches a grocery store or restaurant. Staff also checks for and protects against animal diseases that could threaten people or the Industry.



Protecting the food supply and ensuring every Arizonan is eating disease-free commodities is just part of the AZDA's duties. Additionally, staff check the quality and quantity of fuel, check various scales, prices at retail and check for credit card skimmers at gas pumps.

AZDA employees also ensure that those people

spraying homes and fields to prevent pests are educated and licensed, and that pesticide products sold in stores match the labels. Investigators follow up on calls from the public about animal welfare and native plant act violations.

It is essential that the AZDA is as efficient as possible. In this last year, the AZDA oversaw 10,100 livestock brands and over 127,014 devices. In the last year, AZDA employees conducted approximately 44,406

inspections, not including the over 115,000 trap inspections conducted, and tested 10,570 samples from dairies, meat, seed, fertilizer and feed, including pet food. The AZDA's general fund budget of more than \$10 million provides some of the funds needed to conduct all of the AZDA's tasks. Federal grant dollars and industry fees fulfill the rest of the budget.



Each Division of the AZDA provides support to Arizona Agriculture. The following sections highlight accomplishments and tasks of each.

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 (AZDA) 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 AZDA'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 awareness of, and voluntary compliance with, regulatory requirements. ACT provides agricultural conservation education through the following compliance assistance and education programs:

- Pesticide Safety
- Air Quality

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

- Good Agricultural Practices/Good Handling Practices Food Safety Program
- Livestock & Crop Conservation Grant Program
- Specialty Crop Block Grant Program
- Arizona Citrus Research Council
- Arizona Iceberg Lettuce Research Council
- Arizona Grain Research and Promotion Council
- Agricultural Employment Relations Board

Pesticide Safety Compliance Assistance

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

Pesticide Safety Training

Among the more popular services provided by ACT staff are free pesticide safety training courses. Course attendees learn how to work safely around pesticides or in areas where pesticides have been applied and the steps to recognize, respond to, and prevent pesticide exposure.



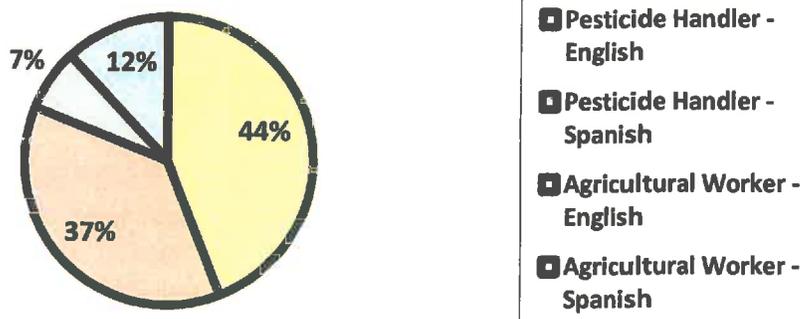
The training courses are provided in English and Spanish and are open to anyone who would like to attend. Licensed and certified pesticide applicators may also attend to learn about the WPS and to receive two hours of continuing education toward the renewal of their licenses.

During fiscal year 2019, ACT staff presented WPS pesticide safety training to 752 people who were employed by 72 agricultural operations, landscaping companies, tribal communities, golf courses and governmental agencies.

Two-hour pesticide handler courses were provided to 610 people who work directly with pesticides. Of the handlers, 28 certified applicators participated to receive updated information and Continuing Education hours toward the renewal of their private or commercial credentials.

In addition to the pesticide handlers, 142 agricultural workers attended a one-hour pesticide safety course. Agricultural workers perform tasks such as weeding, irrigating, and harvesting crops in areas where pesticides have been applied in the previous 30 days.

The following chart shows the percentage of attendance in each type of training and language in which the information was provided:



Arizona Pesticide Safety Train-the-Trainer Workshops



Each year, staff in the Arizona Department of Agriculture's (AZDA) Agricultural Consultation & Training Program works with industrial hygienists from AZDA's Environmental Services Division to present pesticide safety train-the-trainer workshops for trainers of agricultural workers and pesticide handlers.

The workshops, 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 agricultural pesticides.

Hands-on training techniques and group activities are used to demonstrate how to disseminate pesticide information to handlers and agricultural workers. In addition to attending the workshop, participants must pass a 50-question trainer exam before qualifying to provide WPS training in Arizona.

In fiscal year 2019, ACT staff assisted the workshop team in presenting 16 workshops to 242 people. The workshops were held in Marana, Maricopa, Yuma, Phoenix, Surprise, and Willcox. Through these workshops, 234 people completed the trainer requirements and earned a 3-year certification to train agricultural workers and handlers in Arizona.

Pesticide Applicator Pre-Certification Courses and Exam Events

ACT staff administers private and commercial applicator licensing exams during trade shows, conferences, and to large groups working in remote areas.

During fiscal year 2019, ACT staff was invited to provide pesticide applicator pre-certification training and/or administer certified applicator exams to 115 people during six events. The events were held in Cottonwood, Tucson, Willcox, and Flagstaff; Boulder City, Nevada; and Gallup, New Mexico.

Event participants worked for conservation crews involved in invasive weed control programs, university agricultural research projects, forestry departments, and privately-owned agricultural operations. Many of the people who participated in these pre-certification training courses and exam events were new to their jobs and had little to no prior experience working with pesticides. Despite this, 44 test takers passed the National Pesticide Applicator's Core Exam and earned a Private Applicator Certification. An additional 40 people passed both the National Pesticide Applicator Core Exam and a use-specific category exam to earn a Commercial Applicator's Certification.

Pesticide Safety Teaching Tools, Informational Resources, and Training Modules

ACT staff develops and adapts 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.

The ACT pesticide program works closely with the Pesticide Educational Resources Collaborative (PERC) in the development and translation of new national WPS materials, specifically those designed for pesticide safety training purposes. During the current fiscal year, ACT staff worked with a national team of pesticide educators on the Spanish-language translation of the following resources:

How to Comply with the 2015 Revised Worker Protection Standard for Agricultural Pesticides
Worker Protection Standard Handbook for Agricultural Employers
PERC's National WPS Train-the-Trainer On-line Course

Air Quality Compliance Assistance

Regulated Agricultural Best Management Practices

The Regulated Agricultural Best Management Practices (RABMP) program has completed its sixteenth year of providing air quality compliance assistance to Arizona's agricultural community through a cooperative agreement with the Arizona Department of Environmental Quality (ADEQ). The RABMP program provides a means by which Arizona's agricultural community can request compliance assistance without incurring regulatory intervention for applicable federal, state and local regulation.



The RABMP program's goal is to provide the regulated agricultural community in Maricopa, Yuma and Pinal Counties with the necessary resources to achieve compliance with applicable air quality standards. With the addition of the newly formed West Pinal County Nonattainment Area, the RABMP Coordinator is still actively reaching out to growers in Pinal County.

The air quality program staff regularly participates in local meetings of agricultural stakeholders such as:

- Maricopa County rule 310 and 310.01 public process
- Pinal County PM10 reduction stakeholder group
- Yuma County stakeholder groups for the Ag BMP program
- Governor's Agricultural Best Management Practices Committee Technical Workgroup
- State and County Farm Bureau
- Pinal County I-10 Corridor Dust Mitigation Workgroup

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, nursery professionals, and producers in animal agriculture in certain parts of Arizona to implement agricultural Best Management Practices (BMPs) to help reduce air pollution, especially particulate matter (PM10). Agricultural BMPs are feasible and effective practices that have been evaluated for their efficiency, applicability, likelihood for implementation, and that have been adopted into state regulation.

Examples of BMPs include:

- Reduce tillage operations by implementing conservation tillage.
- Combine tractor operations to reduce the number of passes by a tractor in a field.
- Groom manure surface to reduce PM emissions from wind erosion.
- Provide cooling in corrals to increase the stocking density in the cool areas of the corral.
- Apply and maintain aggregate cover on unpaved roads to help reduce the generation of PM from vehicle traffic.
- Chemical irrigation.



- Limit tillage and harvest activity during periods of high dust generation.

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** for site specific assessments and recommendations. For fiscal year 2019 there were 154 visits made to producers to promote the program.
- **Agricultural BMP training for producers.** In fiscal year 2019 there were 15 trainings, presentations, and promotions of the program to agricultural workers and representatives. Outreach and training reached 1,752 participants.
- **High wind advisory email alerts.** During fiscal year 2019, twenty-one forecasts were sent to 335 producers in Maricopa, Yuma, and Pinal Counties.
- **“Air Quality & Agriculture – Air Quality in Action”, a quarterly newsletter.** In fiscal year 2019, 1,376 copies of the newsletter were sent to 341 stakeholders in Maricopa, Yuma, and Pinal Counties.
- **Articles in industry periodicals.** In fiscal year 2019, nine articles were published with a readership of 11,976 people.
- **Cooperation with other agencies/entities** such as the Arizona Department of Environmental Quality (ADEQ) and county farm bureaus to address compliance issues needing correction. These include public complaints and violations. During fiscal year 2019, four issues were corrected.
- **Best Management Practices:** In fiscal year 2019 the Regulated Agricultural Best Management Practices program completed BMP reviews for 72 operations, with 411 BMPs implemented and an estimated 446,129 lbs. /yr. emissions reduced.

Members of the Technical Workgroup to the Governor’s Agricultural Best Management Practices Committee met in 2019 to receive an update on the Pinal County Nonattainment Area from the Arizona Department of Environmental Quality. The update included a timeline for EPA to re-designate the area to serious nonattainment, the creation of a new State Implementation Plan, and EPA’s new finding for attainment.

Another discussion topic was the issue of fallow land in Pinal County due to the Drought Contingency Plan (DCP). It is estimated that the DCP will create up to a 40% increase in fallow land or property taken out of production. This added fallow land will create an increase in windblown dust. The Governor’s Agricultural Best Management Practices Committee will need to meet in 2020 to look at creating best management practices for fallow land.



The RABMP Coordinator is a member of the Pinal County I-10 Corridor Dust Mitigation Workgroup. This workgroup consists of Federal, State, and Local agencies to address windblown dust that creates hazardous driving conditions along the I-10 corridor. The area of concern this past year has been a five-mile radius around mile marker 214. To address this area for the short term the committee approved soil stabilization of a 50-acre plot along the I-10 in October of 2017. The area will continue to be monitored for the next year for any dust movement and vegetation growth.

The workgroup met once in fiscal year 2019 to get an update on soil stabilization of the area around mile marker 214 and discuss future areas for mitigation along the I-10 corridor. It was decided that the committee will meet once a year, or as needed, if issues arise along the I-10 corridor. The group will also be updated during the annual dust workshop held in February each year.

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 the Yuma agricultural industry's proactive approach to addressing the PM10 problem. In fiscal year 2019 the RABMP Coordinator met with producers, attended industry functions, and participated in stakeholder meetings in Yuma. The RABMP Coordinator visited 20 producers, 2 irrigations districts and the NRCS office to discuss the Yuma Agricultural Best Management Practices Program.



In fiscal year 2019 the RABMP Coordinator added outreach visits to San Simon, Bowie and Willcox. Due to the increase in nut production in the area and past windblown dust events in San Simon, it was determined that the added outreach could play a vital role in the reduction of dust emissions. The RABMP Coordinator visited eight pecan/pistachio producers, three farms and a dairy. As undisturbed desert is converted to agriculture, voluntary BMPs will be key in reducing PM10 in the future. Staff looks forward to future collaborations with industry, and state and local agencies to address PM10.

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



The Agricultural Consultation and Training (ACT) Program of the Arizona Department of Agriculture (AZDA), through a United States Department of Agriculture-Agricultural Marketing Service (USDA-AMS) Specialty Crop Block Grant Program grant, offers Arizona's agricultural community assistance in developing a food safety program that will pass the USDA GHP/GAP audit. Good Handling Practices (GHP) refers to post-harvest operations, while Good Agriculture Practices (GAP) refers to on-farm operations and systems, ensuring these crops are produced, packed, stored and handled in the safest manner possible to minimize risks of microbial contamination.

GHP/GAP is a voluntary, on-site farm verification program which has been developed for growers, harvesters, packers, warehouses, transportation lines, and gardeners of consumable specialty crops (fresh fruit, vegetables, and tree nuts). The ACT GHP/GAP Program offers free, classroom training as well as on-site evaluations for the development of operation-specific food safety protocols for the USDA/AMS food safety audit and certification.

Food Safety Certification

While sales of fresh produce to some buyers do not require a food safety certificate, many buyers of fresh produce require third-party food-safety certification as a purchase specification. Without this certificate, a grower may not be able to sell produce to the larger buyers. Certification allows for produce sales to restaurants, hospitals, school districts, farmers markets, wholesalers and distributors who accept the USDA GHP/GAP certification for mitigating food safety hazards.



Classroom Training

ACT's Food Safety Projects Coordinator (FSPC) organizes training classes for industry members throughout the state. These lively, interactive classes have been held in Phoenix, Tucson, Flagstaff, Yuma, Snowflake, Cottonwood, Kingman, Tsale, Leupp, Huachaca City, Sedona, and Willcox.



During the fiscal year 2019, 5 GHP/GPA training classes were held with 88 persons attending. These classes were held in Huachuca City, Tsale (2), Leupp, and Camp Verde.

The structure of the GHP/GAP training class is tailored to the participants' needs, covering the entire fresh fruit and vegetable industry: growing, harvesting, warehousing, transporting, and wholesale distribution. Also discussed is the possibility of intentional sabotage of produce.

There is no cost to attend the workshop, or for training materials, which include sample food safety plans, monitoring logs and tracking forms.

Further incentivizing food safety, AZDA will offset the cost of a successful USDA audit with a cost-share grant of up to 75% while funds remain available from USDA/AMS.

Consultations/On-Site Visits



Upon request the FSPC visits farms, greenhouses, aquaponic facilities and aeroponic operations to discuss food safety concerns with the owners. During the on-site visit, (OSV) the grower and FSPC will review the grower's operation as compared to the GHP/GAP audit, and begin developing a food safety program. During fiscal year 2019 15 OSV with 8 consultations were conducted by the FSPC, with 4 new operations passing the GHP/GAP audit and achieving certification, while 6 previously certified operations were recertified.

Outreach

The FSPC has been invited to present the GHP/GAP program to groups as varied as the University of Arizona's Controlled Environment Agriculture Center (CEAC), Tucson, Garden Club of the East Valley, Mesa, Neighborhood veggie growers, to a visiting agricultural professor of the ITSON (Institute of Technology of Sonora, Mexico), a visiting contingent of agricultural representatives and government officials from Uzbekistan, AZDA FSMA team, and the Local First Arizona's Farm Finance Forum. During fiscal year 2019 the FSPC conducted 8 presentations with over 115 people attending.



During fiscal year 2019 ACT's GHP/GAP Program reached nearly 910 individuals representing 161 AZ specialty crop operations through Arizona Farm Bureau blogs, on-site visits, training, and technical assistance.

The FSPC is also the food safety technical advisor to the Sun Produce Cooperative, a local collaboration of growers, distributors, packers, designed to maximize delivering locally grown produce into the local schools and marketplaces.

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 functioned 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 sixth and final grant cycle was completed in fiscal year 2016. Several state and federal agencies worked together on a large scale geographical conservation project that utilized additional unspent grant funds from all previous grant cycles, and leveraged funds from other agencies.

During fiscal year 2019, the LCCGP Coordinators monitored completed projects from the previous grant cycles. The following types of projects were completed by grantees:

- Utilization of funds as match/cost share to other conservation grants. For example, if the applicant is participating in, or plans to apply for, a USDA Natural Resources Conservation Service (NRCS) Environmental Quality Incentives Program (EQIP) grant which typically requires that the applicant provide a percentage of the total project funding, LCCGP funds could be awarded for use as the required cost share funds to the EQIP contract.
- On-the-Ground Conservation Projects (for example: riparian fencing, water resource development, grassland restoration).
- Livestock deferment funding in relation to a conservation practice or project. For example, if the applicant chooses to implement a conservation management practice such as prescribed burning or herbicide application that requires the deferment of livestock, the applicant may apply for LCCGP funds to cover the costs associated with deferring livestock.



The LCCGP Coordinators continue to administer the existing grant contracts from all previous grant cycles. Throughout the duration of the grant project, the LCCGP Coordinators provide administrative support and information, answer questions and concerns and assist the grantees with reimbursement and funding advance requests. At the close of fiscal year 2019, 56 of the 56 grantees from the fiscal year 2005 cycle, 70 of the 70 grantees from the fiscal year 2007 cycle, 62 of the 63 grantees from the fiscal year 2009 cycle, 42 of the 43 grantees from the fiscal year

2011 cycle, 13 of the 13 grantees from the fiscal year 2013 cycle and 14 of 16 grantees from the fiscal year 2016 cycle had completed their proposed grant projects. Additionally, throughout fiscal year 2019, approximately \$104,896 was disbursed to grantees to work on their contracted projects.

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

Specialty Crop Block Grant Program-Farm Bill



On December 21, 2004, the Specialty Crops Competitiveness Act of 2004 authorized the USDA to provide state assistance for specialty crops. Under Section 101 of the statute, the Secretary of Agriculture is directed to “make grants to States for each of the fiscal years 2005 through 2009 to be used by State Departments of Agriculture solely to enhance the competitiveness of specialty crops.” The Food, Conservation, and Energy Act of 2008 (Farm Bill) amended the Specialty Crops Competitiveness Act of 2004. Under the amended Act, the Secretary of Agriculture is directed to make grants to States for each of the fiscal years 2008 through 2012 (referred to as the Specialty Crop Block Grant Program –

Farm Bill or SCBGP-FB) to be used by State Departments of Agriculture to enhance the competitiveness of specialty crops. The Agricultural Act of 2014 provided funding for the program through 2018. The Agricultural Act of 2018 continues funding for the program through 2023. 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 2019, Arizona’s State Plan was approved by the U.S. Department of Agriculture’s Agricultural Marketing Service (AMS), and a cooperative agreement, which provided \$1,501,187.18 in grant funds to the AZDA, was executed on September 10, 2018. 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 March 7, 2019, AMS announced the availability of \$72.1 million in federal fiscal year 2019 funding. The funding is authorized by the Agricultural Act of 2018. Each state department of agriculture is eligible to receive a base grant of approximately \$241,627. In addition, AMS allocated the remainder of the grant funds based on the proportion of the value and acreage of **specialty** crop production in the state. The 2019 base grant amount plus the AMS assigned value and acreage of specialty crop production for Arizona is \$1,563,242.39. The SCBGP-FB Program Coordinator submitted the Arizona State Plan to AMS on May 23, 2019.

Arizona Citrus Research Council



The Arizona Citrus Research Council was created by A.R.S. §3-468 to support the development of citrus research programs and projects within the Arizona citrus industry. The Council is funded by a per carton (1.5 cents) assessment paid by Arizona Citrus producers. Last year, the Arizona citrus industry produced more than 2.2 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 2019 Financial Status - Arizona Citrus Research Council

| | |
|----------|-------------|
| Revenue | \$36,932.88 |
| Expenses | \$66,459.00 |

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 more than 24 million cartons of iceberg lettuce in fiscal year 2019. 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 2019, the Council continued to support research projects by granting more than \$90,000 to the University of Arizona and the University of Georgia. Some examples of research grant projects include evaluation of new insecticides for insect management, Yuma area-wide monitoring for lettuce insects, satellite measurement of evapotranspiration (ET) and risk assessment and mitigation of foodborne pathogen cross transfer during hydro cooling and processing.

Fiscal Year 2019 Financial Status - Arizona Iceberg Lettuce Research Council

| | |
|----------|-------------|
| Revenue | \$96,119.03 |
| Expenses | \$99,575.25 |

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

Arizona Grain Research and Promotion Council



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

Research continues to be a top priority of the Council by continuing support for the research activities of the University of Arizona. Research projects focused on nitrogen management for wheat, small grain variety testing and drought tolerance for barley. More than \$50,000 was granted for research projects during fiscal year 2019.

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 2019 Financial Status - Arizona Grain Research and Promotion Council

| | |
|----------|--------------|
| Revenue | \$92,350.96 |
| Expenses | \$163,827.22 |

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.

Animal Services Division (ASD)

Animal Health and Welfare Program

Priorities and Oversight

The first priority of the Animal Services Division's (ASD) Animal Health and Welfare Program (AHWP) is the prevention of certain diseases of livestock, poultry and commercial fish; and if established, their subsequent eradication. Relatedly, AHWP protects the public from diseases which are transmissible from livestock to people. Field staff in AHWP enforce all ownership and dominion laws as well as specific equine neglect and livestock cruelty statutes. Additionally, through the State Emergency Response and Recovery Plan (SERRP), AHWP is involved in a myriad of human and animal welfare contingencies. Lastly, the staff of the Meat and Poultry Inspection Program is responsible for the oversight of livestock and poultry slaughtering as well as processing.

Animal Health Programs

There were a total of 18 Administrative Orders issued this fiscal year for animal health issues. Of this amount, 10 were for Equine Herpes Myeloencephalopathy (EHM). One was for rabies and 6 were for Equine Infectious Anemia exposed horses. One was for Virulent New Castle disease in poultry. There were a total of 64 Illegal Entry Hold Orders issued this fiscal year for illegal movement into Arizona. Of this amount, there was 784 head of cattle, 2 head of horses, 16 pigs, 5644 head of sheep and 26 head of goats.

We managed one ranch that was diagnosed with a rabies positive cat that exposed a horse. As this was a fox variant rabies, the decision to do a 6 month quarantine was valid and prudent to make sure other horses had not been exposed. As long as we do not have any neurological animals or unexplained deaths that test positive for rabies, this herd will come off quarantine on August 12th.

We continue to collect samples for Brucellosis suis and pseudorabies in pigs at slaughter as well as scrapies sampling of slaughter sheep and goats.

One case of a Foreign Animal Disease (FADs) was diagnosed in Arizona during this time. In end of March we had a sick bird call that was diagnosed as virulent Newcastle Disease (vND) in Flagstaff. Concentrated door to door surveillance and testing in the 1 KM. zone around the infected premise came up with no other cases. Contact birds have tested negative and premise is to come off 120 day fallow quarantine the week of August 5th after final inspection.

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

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

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

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

USDA Cooperative Agreements

Animal health surveillance programs are predominately funded via the Umbrella Cooperative Agreement grant with the United States Department of Agriculture (USDA). These surveillance programs have primarily included poultry, cattle, horse, swine, sheep, goats, and zoonotic/public health concerns. The reporting year for USDA began April 1, 2018 and concluded March 31, 2019 and the current reporting year began April 1, 2019 and will conclude on March 31, 2020.

Umbrella Grant: Animal Disease Surveillance Program

This cooperative agreement, which supports response efforts as described above, has four parts which include general surveillance, diagnostic testing, outreach & education, and preparedness & response. Protecting the health of food producing livestock and poultry will result in a stable source of wholesome food, reduce the likelihood of animal diseases causing human health problems and preserve the economic viability of Arizona animal agriculture by maintaining disease free confidence with our trading partners.

Early recognition of an animal disease outbreak is essential to reducing the impact of a devastating disease on the agriculture industry in Arizona. For example, California has been dealing with Virulent Newcastle Disease (VND) in backyard poultry since May 2018. It is estimated that this outbreak cost stakeholders more than \$40 million dollars since the first diagnosis. In April of 2019, the first case of Virulent Newcastle Disease was detected in Coconino County, Arizona. A rapid response team of state and federal veterinarians and staff was mobilized. Within a week the outbreak was neutralized, and the team made visits on 232 surrounding premises, identified and tested 1,176 susceptible poultry in the surrounding area. No other VND cases were diagnosed at or since the first case. This ensured the safety and continuity of commerce of poultry and poultry products out of Arizona.

Our State Veterinarian and Assistant State Veterinarians have attended the Foreign Animal Disease Diagnostician (FADD) training. As a part of this training the USDA has world class subject matter experts teach State, Military, and Federal Veterinarians on how to recognize clinical signs, perform diagnostic testing and establish a biosecure zone to prevent spread of disease to other premises. Diseases covered in FADD training include Foot and Mouth Disease, African swine fever, Classical Swine Fever, amongst many others. Several Arizona Livestock Incident Response Team (ALIRT) investigations were conducted during this reporting period in conjunction with the Arizona Veterinary Diagnostic Laboratory. None of these cases were found to be a Foreign Animal Disease.

Arizona's ASD has been very successful in the eradication of several program diseases and have achieved a "Free" status with both brucellosis and tuberculosis. Even though we currently have a free status, we continuously follow-up with suspect cases from cattle, sheep, and goats being tested for interstate movement. This past year Arizona Accredited Veterinarians tested 58,477 head of cattle and State/Federal Veterinarians performed follow-up testing on 663 head of cattle. No cattle were diagnosed with Tuberculosis this year. Arizona maintains its TB free status through ongoing surveillance which encourages producers in other states to continue to buy cattle from Arizona.

Arizona's voluntary National Poultry Improvement Plan (NPIP) was established for hobbyist and

exhibition poultry and game bird breeding flocks and products. The State Veterinarian's Office has worked in cooperation with the division's Egg Program to hire an NPIP Coordinator who works with local breeders and producers to conduct testing and inspections and provide producer education. NPIP is comprised of elements of biosecurity, disease monitoring, sanitation and record keeping. Even though the NPIP program is voluntary, any person moving hatching eggs, chicks or older birds across state lines may be required to become an NPIP participant in order to meet other state's entry requirements. This program allows us a better opportunity for surveillance along with the enhanced opportunity to work one on one with poultry producers with their disease monitoring and biosecurity. Ongoing goals for NPIP are to perform surveillance for Avian Influenza and Virulent Newcastle Disease on backyard exhibition birds, birds seized by local law enforcement, sick birds, and stray birds.

One of the cooperative agreement's other goals is to monitor diseases in animals that are transmissible to humans (zoonotic). We have worked with the Arizona Department of Health Services (ADHS) to make sure the public is educated and protected during outbreaks of Plague, Leptospirosis, Brucellosis, and Rabies. We participate in monthly conference calls which maintain an exchange of information & dialogue between departments. We have also been involved in joint educational outreach events with ADHS for public education and rabies vaccination clinics in southern Arizona.

As of August 9, 2017 the Department no longer participates in the Animal Disease Traceability Cooperative Agreement. The ASD continues to track suspected disease cases with the limited resources that have been allocated. However, if additional funding was provided, we would immediately modernize our record keeping with an electronic database. This database would be kept in house and allow us to track livestock moving interstate in a more efficient manner than searching through paper records which is inefficient and costly to the tax payer of Arizona. It is documented that there are now over 1,000,000 pigs and 400,000 cattle transported on American highways every day. This has required most states to swiftly modernize their technology to effectively respond to disease investigations given the potential for rapid disease dissemination within their state. Moving forward stakeholder support to modernize our technology will help prepare the state of Arizona for future disease outbreaks like the one in Coconino County.

Annual Licenses

Aquaculture

The Aquaculture Program regulates commercial operations that grow, transport and process fish and shrimp. These are the numbers of issued licenses: 21 transporters, 9 processors of fish and shrimp for human consumption, 19 growing facilities, 1 research and educational facilities and 5 operations that charge a fee for fishing.

Feedlots

Twenty four feedlot licenses were issued in FY19. This is only required for feedlots with 500 or more head of beef cattle.

Inspection Data Tracking

As of July 1, 2017, the Livestock Inspection Program began tracking field activities through the Arizona Department of Transportation's Enforcement and Compliance Division. This change has resulted in our

customers having access to a 24/7 dispatch. The dispatch phone number of 623-445-0281 did not change during this transition. When we went to the IT inspection in July, 2017 we were able to track the inspection numbers for our staff. They did almost 10,700 inspections on the computer system in FY2019. There are instances that paper inspections are necessary; however, the IT inspection system has improved the Department's efficiency and accuracy of the inspections which allows for freer movement of livestock. This data is summarized in the table titled "FY 2018 Calls for Service from the Public" at the end of the ASD section.

Self-Inspection Program

Currently, over 5551 producers are approved to use the Self-Inspection Program. This is an increase of about 351 from the prior year. Livestock owners understand the value of documenting animal movement and have accepted responsibility for intrastate documentation through Self-Inspection certificates. Livestock Officers, Inspectors and Deputies document non-Self-Inspection activities such as the sale of range cattle and custom slaughter livestock. Exhibitions, fairs and shows have also been supportive of the "seasonal exhibition pass" implemented by statute and rule. Livestock theft investigation and enforcement cases remain at a low level, and Arizona continues to maintain disease free status in all industry / state / federal cooperative disease control programs.

Arizona Livestock Incident Response Team Program

The Arizona Livestock Incident Response Team (ALIRT) program was implemented through legislative authorization in FY 2005. Annual funding has been used to train and equip participating private veterinarians to conduct investigations of unusual livestock disease events and to conduct outreach and education to the livestock producers. Participating veterinarians and state staff received training in March 2015. 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 AZDA and implemented through cooperation with the University of Arizona's Department of Veterinary Science Veterinary Diagnostic Laboratory and Cooperative Extension. USDA Wildlife Service and Veterinary Service actively participate in a program designed to facilitate the potential diagnosis of unexplained livestock losses. Once a problem has been discovered, various levels of response may be initiated. It all starts with the producer, local veterinarian, and/or the local University of Arizona Cooperative Extension Office. If warranted trained ALIRT private veterinarians will respond to the scene, start the investigation and collect samples. This is followed by a conference call of the ALIRT steering committee that determines what, if any, actions are necessary. This year the Midwestern University Diagnostic Laboratory was added to the ALIRT response network to facilitate a more timely response especially for cases in the northern half of the state where a necropsy is needed.

The cost of case work-up is covered by ALIRT program funding and includes expenses for the ALIRT private veterinarian and other response personnel, as well as laboratory expenses related to the diagnosis. Once a diagnosis is made and/or a treatment program is implemented, the expense becomes the responsibility of the producer. The producer plays a key role in this process, starting with the reporting of a problem in his herd. The producer also is important in preparing a herd history and identifying any contributing factors that may assist in diagnosis. The ALIRT program 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. The program also begins if 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.

This last year Midwestern University Pathology lab was added to the ALIRT program to increase response time for issues in the Northern part of Arizona.

Meat and Poultry Inspection Program

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

State MPI personnel monitor general plant and equipment sanitation, processing sanitation, good manufacturing practices during production, ante mortem and post mortem inspection at slaughter, humane handling, Hazard Analysis Critical Control Point (HACCP) implementation, multi-ingredient formulation, the use of approved labeling, net weights and perform laboratory sampling programs as requested. They also verify compliance with state and federal regulations prior to allowing the inspected and passed triangle shaped "mark of inspection" to be applied to applicable products.

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

Each day one of the state's 26 state inspected plants operates, an MPI employee makes at least one unannounced visit to review production. If discrepancies are found, they are documented and discussed with plant management to determine what corrective actions will be taken to ensure that no unwholesome or mislabeled product leaves the plant. In slaughter plants an MPI Inspector observes each animal presented for slaughter both alive and at various stages during the carcass dressing procedure looking for any pathology that may be present.

Unfit and/or unwholesome carcasses and parts are removed from the human food chain and de-characterized for inedible purposes. Humane handling is strictly enforced to ensure no animal is mistreated or improperly stunned at slaughter.

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

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

Labels are reviewed to show that they reflect the product is actually as the label states and that the label meets all labeling requirements per regulation, including approval and allergen declaration. Formulation is observed to verify the product is being made to meet product standards and as approved. Net weights are verified on certified scales weighing random lots of finished product to ensure compliance.

Product samples are taken as requested by the Program Manager in selected establishments and delivered to the State Agricultural Laboratory to be analyzed for the pathogen of concern. In the event of non-compliance, establishments are notified by written non-compliance reports and regulatory control actions are taken as needed to ensure affected product does not reach the consumer.

Inspectors also periodically visit the other 47 processors known as "custom exempt," which are firms that process meats, game and poultry for personal consumption of the owner. These types of processors may not sell meat to the general public without obtaining an official slaughter and processing license.

More than 727 food safety samples were submitted to the State Agricultural Laboratory to be analyzed for E-coli 0157:H7, non-0157 Shiga Toxin E-coli (STEC), Salmonella, Listeria Monocytogenes or violative antibiotic residue. Additionally, antibiotic residue samples requested by USDA / FSIS and Tuberculosis

samples from suspect animals at slaughter were also taken. All of this information is entered each day by the inspectors into a computer database system mandated by FSIS called the Public Health Information System (PHIS). This system tracks all aspects of the meat inspection program.

Almost 5,100 on-site food safety inspections were performed at official establishments and custom exempt facilities this past year. No food-borne illnesses were reported from any Arizona official establishment in Fiscal Year 2019.

Meat and Poultry Compliance Program

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

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

If requested Compliance will assist with food safety related illness outbreaks and epidemiological investigations. This consists of conducting product trace back and trace forward. The program coordinates with USDA and various statewide health departments in conducting surveillance reviews and investigations of retail stores and restaurants to ensure that meat and poultry products are wholesome and properly labeled. Compliance will also conduct investigations of illegal slaughter and/or processing operations statewide. Compliance has a database of 112 licensees which include: warehouses, distributors, jobbers, dead stock haulers, brokers and meat storage.

Dairy & Dairy Products Inspection Program

Dairy inspection staff regulate all aspects of the dairy industry, from the dairy farm until products leave the processing plant. Beginning at the farm, inspectors review plans submitted for construction of new farms and the remodeling of existing farms. Farm inspections are conducted to check for compliance in sanitation, milking 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, used to collect and transport milk to processors, and milk tanker drivers are inspected and licensed by the dairy inspectors.

Dairy inspectors regulate dairy processing plants ranging from small cheese makers to plants processing millions of pounds of milk per day. At plant inspections, inspectors review plant processing records, and facilities are inspected for compliance with sanitation and maintenance requirements. Pasteurization systems are tested quarterly and the controls are sealed by the inspector. If regulatory seals are broken for maintenance or repairs, the plant must immediately notify the Dairy Program and the equipment must be retested and sealed by the inspector or certified industry sealer. Arizona milk processors use a variety of approved pasteurization processes. These processes include the relatively simple batch pasteurizer and proceed in complexity to systems called Ultra Pasteurization, which greatly extend the shelf-life of dairy products. In FY 2019, the three Dairy inspectors conducted 940 sample visits, 199 processing plant inspections, 179 tanker driver evaluations, 189 pasteurizer tests (with an additional 92 regulatory seal

replacement visits), 235 dairy farm inspections and 210 milk tanker inspections.

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

Finished milk and milk products are collected by Dairy inspectors and submitted to the State Agricultural Laboratory for testing. In FY 2019, there were 3,261 dairy samples submitted to the lab, and 8,027 separate analyses were conducted (coliform, standard plate count, inhibitor, phosphatase, somatic cell count and beta lactam).

Universal Sampling System

Regulations require regular testing of milk produced by Grade A dairy farms. In Arizona, dairy farms are spread out over a large geographic area. Under the "Universal Sampling System," milk hauler/samplers are licensed by ADA after passing an exam. These hauler/samplers are also evaluated in the field by Dairy inspectors to 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.

If milk is determined to be adulterated, it must be either removed from the human food system or destroyed. In FY 2019 eight tankers of milk were disposed of due to positive antibiotic tests for a total of 420509 pounds. Eight tanker loads, were found to be in violation of the aflatoxin limit for milk for a total of 416420 pounds. The combined approximate total number of tanker loads received at Arizona Dairy plants is 108,000 loads.

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) in approved equipment. 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. During FY 2019 there were six licensed facilities that sell raw milk for consumption.

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 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 and participated during the conference on April 26 – May 1, 2019 in St. Louis, Missouri.

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 meet the required quality standards and that they were produced in accordance to state statutes and are held at temperatures of 45° Fahrenheit for eggs and 0° Fahrenheit for frozen egg products. Inspectors also verify proper packaging, sanitary handling, dating and weighing of eggs at production facilities, warehouses or retailers for product originating out-of-state. Inspectors also check Nest Run Egg producers for proper handling, labeling and registration with the Department. Nest Run Egg producers are limited to selling a total of 750 dozen unwashed ungraded eggs annually.

In FY 2019, the Departments conducted 1,345 inspections visits at producers, dealers, wholesalers and retailers. During those inspections, 376,962 individual eggs were graded and a total of 44,011 dozen eggs were retained for noncompliance with state law.

USDA Inspection and Grading Program

The Department also maintains cooperative programs with the USDA to provide "grade labeling" services to the industry upon request. These cooperative programs also include surveillance and enforcement under the federal Egg Products and Inspection Act, which regulates the movement and processing of certain types of under-grade eggs to keep them from entering the market. In FY 2019 we conducted 30 shell egg surveillances visits. ADA also enforces the Agricultural Marketing Act of 1970.

In the past inspectors provides inspection services for USDA's School Lunch Program for poultry purchases made on behalf of school districts statewide. Those verification inspections are no longer required under USDA rules and no longer performed.

Graders perform both temporary and resident (in-house) grading services for the egg industry in Arizona. A total of 11.25 FTE state employees and one supervisor are stationed at five egg processing plants and provide inspection / grading services 365 days a year, 7 days a week. In FY 2019 the Department provided 24,020 hours of resident grading service under this USDA program. Resident graders continually monitor plant sanitation, processing temperatures, handling and holding cooler temperatures. This USDA program is voluntary and paid by the producer requesting the service. Eggs packed under USDA program supervision are eligible to be marked with USDA shield grade mark or other USDA identification. The USDA grade mark adds value to shell eggs because it provides a high level of guarantee for quality and safety. Many retailers require the eggs to be graded by USDA to provide this additional level of service to their customers.

Emergency Preparedness and Response

State Emergency Response and Recovery Plan

The Department is the primary agency responsible for Emergency Support Function #11 of the State Emergency Response and Recovery Plan (SERRP). In this role, the Department coordinates the emergency response activities of state, federal and private resources in response to and recovery from natural and human-caused disasters as well as plant, pest and FAD incidents that can negatively impact agricultural production.

Training and Exercise Program

The AZDA's emergency management team identified the need for a more comprehensive training and exercise program. A major gap that was addressed this year was the need for additional AZDA staff to be trained on emergency management principles. In the event of a large disaster or emergency, the Department

would need several people to fill roles within the Incident Command System. Department employees from all divisions are getting trained in emergency management to enhance our overall preparedness.

Another item implemented this year was a training schedule for livestock services staff to complete Federal Emergency Management Agency courses. Also all emergency responders within the Department must attend a personal protective equipment training to ensure they are prepared to respond to hazardous incidents.

Finally, this past fiscal year the Department hosted the USDA-FBI Animal/Plant Health Joint Criminal-Epidemiological Investigations Course for the state of Arizona. Representatives from multiple disciplines including law enforcement, fire, emergency management, agriculture, health, and safety attended the two-day course to learn how law enforcement and animal/plant health officials would work together during a suspicious or high consequence animal or plant disease incident. The event was a great success and helped create new relationships between the Department and other agencies.

Palo Verde Nuclear Generating Station

The Department is an integral part of the state and county response to any emergencies related to the Palo Verde Nuclear Generating Station (PVNGS) located west of Phoenix. With three reactors, this is the largest nuclear power plant in the U.S. with the capacity to serve millions of homes. Should an incident at PVNGS result in the release of radioactive material, the Director is statutorily authorized to “abate, suppress, control, regulate, seize, quarantine or destroy any agricultural product or foodstuff that is adulterated or contaminated as the result of an accident at a commercial nuclear generating station.”

In March 2019, DEMA conducted a full-scale exercise to assess the State’s readiness to respond to a nuclear disaster at the plant. The Federal Emergency Management Agency evaluated the exercise and determined that the Department was successful in completing its overall objectives for the exercise. The exercise also helped assess planning gaps, which have since been addressed.

Emergency Response

There was an isolated incident involving Virulent Newcastle Disease (VND) in Northern Arizona that required an emergency response from the Department and the United States Department of Agriculture (USDA). The Department’s Emergency Preparedness Planner, Emergency Coordinator, State Veterinarian, Assistant State Veterinarians, National Poultry Improvement Plan Coordinator, Livestock Captain and several livestock officers supported the incident along with a few veterinarians from the USDA. Overall, the emergency response lasted about two weeks.

FY 2018 Calls for Service from the Public and Livestock Inspections.

| Calls for Service | |
|--|-------------|
| Calls for inspection (may result in multiple inspections) | |
| Ownership | 4491 |
| Butcher | 902 |
| Highway and Road Kill | 79 |
| Total | 5472 |
| Welfare Calls | |
| Equine | 568 |
| Cattle | 106 |
| Goats | 63 |
| Sheep | 20 |
| Swine | 29 |

| | |
|------------------------------------|--------------|
| Total | 805 |
| Out of Place Call | |
| Loose and Stray | 752 |
| Theft | 53 |
| Total | 805 |
| Other Calls | |
| Dogs Chasing/Killing Livestock | 12 |
| Misc. calls | 1 |
| Total | 13 |
| Total Calls for Service | 7075 |
| Livestock Inspections | |
| Total inspections IT | 10,693 |
| Paper inspections | 356 |
| Total Livestock Inspections | 10693 |

Citrus, Fruit & Vegetable (CFV) Division

Standardization

Arizona ranks third in the nation for overall production of fresh market vegetables. Arizona acreage produced over 99 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 87% of the state’s total produce production, based on carton count for fiscal year 2019 (July 1, 2018-June 30, 2019) are as follows:

| | | | |
|-----------------|------------|-------------|-----------|
| Iceberg lettuce | 24,405,556 | Broccoli | 6,227,550 |
| Romaine lettuce | 19,353,392 | Cauliflower | 4,453,735 |
| Spinach | 7,971,256 | Watermelon | 4,131,909 |
| Cantaloupe | 7,688,295 | Cabbage | 3,978,812 |
| Leaf Lettuce | 6,302,892 | Spring Mix | 2,484,382 |

As detailed below, the Citrus, Fruit and Vegetable Division and the Federal State Inspection Service conducted 21,010 inspections last year. 1,830 were shipping point and 19,180 were market. In addition, the Citrus, Fruit and Vegetable Division issued 407 licenses to the produce industry.

Industry Funded -- Industry Supported

The Citrus, Fruit and Vegetable Division and the Federal State Inspection Service are entirely self-funded and receive no general fund allocations.

Standardization Program

Citrus, Fruit and Vegetable Standardization Funds are used for the operational costs associated with the collection of fees, licensing produce dealers and shippers and the compilation of statistical data. This includes services conducted for the Arizona Leafy Greens Food Safety Committee, the Arizona Citrus Research Council, the Arizona Lettuce Research Council, USDA Market News and the FDA Food Safety Modernization Act (FSMA) Produce Safety Rule (PSR) Implementation. These funds are reviewed quarterly and adjusted yearly by the Citrus, Fruit and Vegetable Advisory Council.

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. From this group of leaders their respective industries meets quarterly with staff of the Citrus, Fruit and Vegetable Division to review program policy and budgetary items.

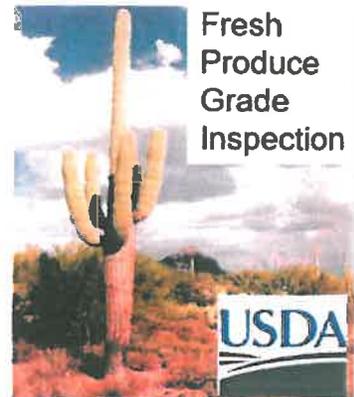
In 2018, new legislation passed that establishes the Citrus, Fruit and Vegetable Program as a division within the department. The new legislation provides the AZDA primacy for the FSMA-PSR and granting the department on-farm food safety regulatory authority over fresh produce production and harvest.

Federal-State Inspection Service- Fresh Produce Grade Inspection

This year the Citrus, Fruit and Vegetable Division successfully completed twenty-three years 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 at the shipping point (point of origin), port-of-entry (Arizona-Mexico border) or the terminal market (point of destination).

This Federal State Inspection Service program is administered by CFV and 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 a total of 27.1 million packages, with more than 492 thousand onions, 1.3 million avocados, 1 million packages of oranges, 370 thousand packages of field tomatoes and 22.3 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 Division 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, the 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 (GAP/GHP) Practices for the produce industry.

Federally licensed state inspectors perform these audits at industry's request. Last year state auditors performed 42 GAP/GHP audits. Again, Citrus, Fruit and Vegetable Division and Federal State Inspection Service developed cost-reduction efficiencies for Arizona's agriculture industries through the cross-training of department inspectors into auditors that provide the Leafy Greens audits for the Arizona Leafy Greens Food Safety Committee.

Arizona Leafy Green Products Shipper Marketing Agreement (Arizona LGMA)

In September 2007 Arizona farmers came together to raise the bar for food safety. The produce industry solicited the first Marketing Agreement in the history of the Arizona Department of Agriculture. As a result the Arizona Leafy Green Products Shipper Marketing Agreement (Arizona LGMA) was formed. This agreement will renew for an additional four years in October 2019.

In 2017, the Arizona LGMA program worked to align their standards with FSMA PSR and received official recognition of this alignment. Therefore, Arizona LGMA members that are in compliance with the Arizona LGMA standards are seen as in compliance with the new federal standards under FSMA-PSR.



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 the State of Arizona. 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 Arizona LGMA are working collaboratively to protect public health by reducing potential sources of contamination in Arizona-grown leafy greens. Leafy green products of the Arizona 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 and chard.

Assessments on signatories to the Arizona Leafy Green Products Shipper Marketing Agreement are based on cartons or carton equivalents of affected commodities sold. A shipper is 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 Arizona LGMA has 38 signatory shippers that represent 96% of the volume leafy greens grown in Arizona. Arizona 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 to sell products grown in compliance with the Arizona LGMA Metrics, food safety practices accepted by the Arizona Leafy Greens Food Safety Committee. Last year LGMA used the Federal State Inspection Service Third Party Audit program to perform 110 audits.

In 2018, a tragic *E. coli* outbreak associated to romaine lettuce produced in Yuma, AZ pulled the leafy greens industry even closer to address the issue. The Leafy Greens Food Safety Task Force was developed, which is comprised of over 130 industry stakeholders, government entities and academics to find solutions to prevent it from happening again.

The recommendations of the Leafy Greens Food Safety Task Force were the result of five working groups who were seeking ways to improve the safety of leafy greens in light of the recent *E. coli* outbreak associated with romaine lettuce. The Technical Committees of both the California and Arizona LGMAs met to consider recommendations from the Task Force that could be implemented by changing the Food Safety Practices, or Metrics, required of all LGMA member companies. The Task Force efforts are ongoing with a long list of research and proposed standard changes for the production and harvest of lettuce and leafy greens.

In 2019, the United States Food and Drug Administration (FDA) lead a romaine lettuce surveillance sampling program focused on commercial cooler and cold storage facilities. All samples were collected prior to handling by workers at the cooling and cold storage facilities, many of which opted to hold the product pending notification of the test results. During the assignment, the FDA collected and tested 118 samples for each pathogen. The FDA did not detect Salmonella in any of the samples. The agency detected Shiga toxin-producing *E. coli* (STEC) in a single sample, however, further analysis determined that the bacteria was not pathogenic. The findings of this assignment suggest that there was no widespread STEC or Salmonella spp. contamination of romaine lettuce from the Yuma growing region during the period when the sampling occurred. The FDA is continuing to work with leafy greens stakeholders in the Yuma region to consider a longer-term environmental study to identify and control risks that will prevent future outbreaks, with the ultimate goal of protecting consumers.

Organic Certification Cost Share Reimbursement

Through a federal grant, the Citrus, Fruit and Vegetable Division oversees the Organic Certification Cost Share (OCCS) reimbursement program. The OCCS provides cost share assistance to producers and handlers who are obtaining organic certification for the first time or renewing their previous certification. Cost share assistance is provided on a first come, first served basis, as long as funds are available.

Organic operations may receive one reimbursement per certificate or scope of certification per year. The National Organic Program currently recognizes four scopes of certification: crops, wild crops, livestock, and processing/handling. This means that clients with more than one certification scope may be eligible for more than one reimbursement.

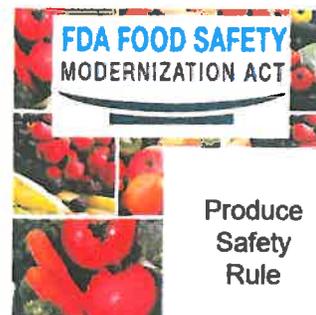
Eligible operations will be reimbursed up to 75% of their organic certification costs, not to exceed \$750, for each NOP scope of organic certification. Any operation that is located within the United States and received organic certification on or between October 1, 2017 and September 30, 2018 may apply for reimbursement.

The Citrus, Fruit and Vegetable Division has overseen this program since FY 2010 and has provided reimbursement for 332 certifications, reimbursing over \$353,000 to Arizona producers and handlers.

FDA Food Safety Modernization Act- Produce Safety Rule

In September 2016, the United States Food and Drug Administration (FDA) awarded the Arizona Department of Agriculture (AZDA) and the Citrus, Fruit and Vegetable Division a five year grant/cooperative agreement to implement the Food Safety Modernization Act (FSMA) Produce Safety Rule.

Under this Cooperative Agreement, CFV will provide statewide training/outreach for the Produce Safety Rule. FDA requires at least one person from every farms attend the Produce Safety Alliance – Produce Safety Rule Grower Training. The AZDA began this training in September of 2016 and CFV has trained over 220 participants. CFV is currently working to implement the National Association for State Departments of Agriculture (NASDA) On-Farm Readiness Review (OFRR), which provides a one-on-one farm visits to evaluate a farm's food safety practices and provide resources and guidance for improvement prior to any regulatory inspections.



The Cooperative Agreement also covers regulatory oversight and compliance. In 2018, new legislation passed that establishes the Citrus, Fruit and Vegetable Program as a division within the department. The new legislation provides the AZDA primacy for the FSMA PSR and granting the department on-farm food safety regulatory authority over fresh produce production and harvest. FDA does not intend to begin regulatory enforcement until spring of 2019.

Environmental Services Division (ESD)



The Arizona Department of Agriculture Environmental Services Division is made up of two sections. The licensing section and the compliance section. We are responsible for serving our customers and protecting consumers and human and environmental health. The Licensing Section provides licensing services for many of the agency programs ensuring excellent customer service and appropriate cash handling. The compliance staff protects the public, agricultural workers and pesticide handlers employed in agribusiness through field inspections and complaint follow-up. They monitor proper use of crop protection products and ensure compliance with environmental laws and rules. They also inspect any place where

feed, fertilizer, pesticide and seed (the non-food products) are sold reviewing labels to ensure they are in the proper format, the company whose name is on the label is properly licensed or their products are registered. In addition they take samples for analysis at the State Agricultural Laboratory to ensure consumers are receiving what is represented on the labels. Finally they provide training for maintaining pesticide related credentials and for the Worker Protection Standard Train the Trainer program.

Staff Allocations

The Environmental Services Division had 20 full-time employee positions as of June 30, 2019. Six of these positions are in the field.

Licensing

The Department of Agriculture is committed to providing quality customer service on a timely basis. The following table represents the total number of certifications, licenses, permits, & registrations issued by the Licensing Section in FY2019:

Certifications, Licenses, Permits, & Registrations issued in FY2019*

| Program | Number |
|---|---------------|
| <i>Pesticide Companies</i> | 1,506 |
| <i>Pesticide Products Registered</i> | 13,606 |
| <i>Fertilizer Companies</i> | 626 |
| <i>Specialty Fertilizers Registered</i> | 5,030 |
| <i>Feed Companies</i> | 783 |
| <i>Seed Licenses</i> | 1,848 |
| <i>Dairy/Milk Industry Licenses</i> | 359 |
| <i>Aquaculture Licenses</i> | 62 |
| <i>Egg & Egg Products</i> | 100 |
| <i>Meat Industry Licenses</i> | 252 |

| Weights and Measures | Number |
|----------------------------------|---------------|
| <i>Public Weighmasters</i> | 2504 |
| <i>Weights and Measures RSAs</i> | 153 |
| <i>Weights and Measures RSRs</i> | 523 |

| Program | Number |
|--------------------------------------|---------------|
| <i>Native Plant Permits Issued</i> | 975 |
| <i>Native Plant Tags</i> | 43522 |
| <i>Equine Rescue</i> | 10 |
| <i>Equine Hauling</i> | 37 |
| <i>Feedlot Licenses</i> | 24 |
| <i>Free Sale Certificates</i> | 193 |
| <i>Free Sale Products Registered</i> | 2,283 |
| <i>WPS Trainer Certificates</i> | 317 |
| <i>Livestock Brand Certificates</i> | 1,996 |

*Some numbers derived from revenue vs database reporting

Environmental Services and Pest Management Divisions' Credentialed Pesticide Use Licenses and Permits Issued

| Environmental Services Division (Agricultural) | | Pest Management Division (Non-Ag) | |
|--|-------|-----------------------------------|-------|
| Total Agricultural Licenses Issued | 2,396 | Total Non-Ag Licenses Issued | 9,989 |

The Pest Management Division has an internet based license renewal system – RenewEZ; which processed 97% of all renewals received in FY2019. All Pest Management Division certifications and licenses expire on May 31st. Credentials Online is the Environmental Services Division online renewal system; which processed 37% of all renewals received in FY2019. All Environmental Services Division certifications and licenses expire on December 31st. In addition to the Credential renewals, Pesticide Product registrations can be renewed online as well. In FY2019, 34% of all Pesticide Product Registrations were renewed online.

Industry Fees Protect Consumers

The Non-Food Quality assurance program is funded with no general funds. The funding comes from monies collected from: an annual \$10 commercial feed license and a quarterly \$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 quarterly \$0.25 per ton fertilizer inspection fee; a \$110 per product pesticide registration; and an annual seed license fee of \$50 for dealers and \$100 for labelers.

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 FY2019, \$1,091,053 in fees were collected for the WQARF: \$60,440 in fertilizer fees and \$1,030,613 in pesticide registration fees.

| Fertilizer Tonnage FY2019 (in Tons) | | |
|-------------------------------------|--------|---------|
| Bags | Bulk | Liquid |
| 114,599 | 91,302 | 167,169 |
| Total | | 489,008 |

| Feed Tonnage FY2019 (in Tons) | |
|--------------------------------------|-----------|
| Pet Food – Animal Food - Supplements | |
| Total | 1,654,487 |

Testing Center

Besides processing licensing applications the Environmental Services Division administers several tests that are required to obtain various credentials. The tests include milk haulers, cotton seed samplers, a myriad of Ag pesticide-use licenses, weighmasters and registered service representatives. Tests are administered Monday through Friday at Department offices in Phoenix. The pesticide credential exams are also administered in Yuma and Tucson. To schedule a testing appointment, applicants should call (602) 542-3578 (Phoenix), 928-344-7909 (Yuma) or 520-770-3035 (Tucson).

Exams Administered in FY 2019

The following table represents the total number of certifications, licenses, permits, & registrations issued by the Licensing Section in FY2019:

| <i>Environmental Services Division – Total No. of Tests Administered</i> | <i>Pass Rate</i> | <i>No. of Unique Testers</i> |
|--|------------------|------------------------------|
| <i>650</i> | <i>60.82%</i> | <i>559</i> |

The Pest Management Division exams are administered by a third-party vendor, Metro Institute, at no cost to the State. Metro has proctor sites in Phoenix, Glendale, Tucson, Flagstaff, Prescott, Kingman, and Yuma.

| <i>Pest Management Division - No. of Tests Administered</i> | <i>Pass Rate</i> | <i>No. of Unique Testers</i> |
|---|------------------|------------------------------|
| <i>6,090</i> | <i>59.6%</i> | <i>4,350</i> |

Licensing Requires Continuing Education

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.

Pesticide Use & Worker Safety Field Work

Pesticide Compliance

The inspection staff conducts a number of different types of health and safety inspections. The Department inspection staff observes applications, mixing and loading, storage and empty container disposal of pesticides to ensure pesticides are being used safely. They inspect businesses that repackage, manufacture/distribute pesticides to ensure compliance with state and federal pesticide sales, manufacturing and bulk storage regulations.

| | |
|--|-----------|
| <i>Total Number of Applications Observed– Storage – Mixing/Loading</i> | 27 |
| Pesticide Applications Observed | 22 |
| Experimental Use Pesticides Applications Observed | 5 |
| Mixing/Loading of Pesticide Products Observed | 11 |
| Storage of Pesticide Products and Integrity of Labels Inspected | 23 |

Restricted Use Pesticides

Any product making a claim to control, mitigate, repel, kill etc. a pest is considered a pesticide by Arizona and Federal law. Inspections are conducted at pesticide marketplaces to ensure that pesticides are registered with the state and the Environmental Protection Agency.

Inspections at pesticide dealers and on agricultural establishments ensure pesticides classified as restricted use are sold and used only by certified individuals. Restricted use pesticides are those that have the potential to pose a higher risk and therefore can only be used under the direction of a certified applicator. The applicators become certified through testing, which ascertains their understanding of label directions and their ability to manage the associated risks.

| <i>Restricted Use Pesticide (RUP) Dealer Audits</i> | Number |
|---|-----------------|
| <i>Pesticide Seller Permit (PSP) Audits Conducted During Year</i> | 24 |
| RUP Pesticide Seller Enforcement Action | 3 |
| Warnings Issued | 1 |
| Citations Issued | 2 |
| Penalties Assessed | \$122.00 |
| <i>Certified Applicator License (PUP/PUC/PUG) Audits</i> | 34 |
| RUP Certified Applicator Enforcement Action | 1 |
| Failure To Maintain Records Of RUP Applications | 1 |
| Penalties Assessed | \$71.00 |

Report Pesticide Use and Misuse

The Environmental Services Division (ESD) has a long standing Pesticide Hotline at 1-800-423- 8876 where potential pesticide misuse can be reported. Arizona requires that this number be part of the required worker safety training elements so workers and handlers have the knowledge to make it easier to report worker protection standard (WPS) concerns. Pesticide misuse/drift complaints are also received from Arizona residents calling directly to the Department main telephone number, (602) 542- 4373. Such calls are forwarded to ESD inspectors for further investigation. This year we also received a number of referral calls from the EPA National Complaint Hotline.

Misuse is Taken Seriously

Complaints alleging pesticide misuse are promptly and thoroughly investigated. Once a complaint investigation is complete, a recommended disposition is prepared. No recommended disposition dealing with a third party complaint can take place without a review and approval by the Associate Director, the Director and by 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 and can be proven in court, a citation will be issued. Cited parties may request a hearing with the Office of Administrative Hearings or pay a civil penalty to the state general fund as established by law for their actions.

| <i>Pesticide Use / Complaints / Referrals</i> | Number |
|---|-------------------|
| <i>Use Inspections</i> | 16 |
| with Worker Protection Safety Violations | 1 |
| with Drift | 10 |
| Non-ag complaints | 6 |
| <i>Referrals</i> | |
| EPA | 1 |
| Inter-Agency | 1 |
| from Third Party | 14 |
| Warnings Issued | 8 |
| Citations Issued | 4 |
| Penalties Assessed | \$1,208.80 |
| Pesticide Product Misuse | 2 |

| <i>Pesticide Control (USE) Violations</i> | No. and Types of Violations |
|---|------------------------------------|
| Drift / Overspray Causing Unreasonable Effects | 3 |
| Not Applying Pesticide According To Label Directions | 1 |
| Instructing Others to Apply a Pesticide Inconsistent With Its Use | 1 |
| Damage to crops | 3 |
| Operating without a valid license | 1 |

Agricultural Worker Safety

Farms, forests, nurseries and enclosed spaces (greenhouses) purchasing and applying agricultural use pesticides must comply with Arizona's Worker Protection Standard (WPS). Golf courses which have nursery facilities (move plant material from one location to another) are also subject to the Worker Protection Standard. The worker safety program and regulations are designed to protect agricultural workers and pesticide handlers from pesticide related injuries.

The violations found most frequently are not having trained workers or information missing from the central posting locations. As an agency we continue to educate on the regulations as it is best for everyone when no violation occur.

- Workers and handlers must be trained annually, with an expanded list of subject matters. Records must be kept on the training for 2 years.
- The safety poster, in addition to being placed at the central location, must also be at a decontamination location where more than 11 people are working.

| <i>Worker Protection Standard (WPS) Inspections</i> | Number |
|--|------------------|
| <i>WPS Total Number of Inspections Conducted</i> | 104 |
| WPS ENFORCEMENT ACTION initiated | 14 |
| <i>Citations Initiated</i> | 10 |
| <i>Penalties Assessed</i> | \$4125.00 |

| Worker Safety Violations Found | Number of Violations |
|---|-----------------------------|
| Training | 15 |
| Central Posting – Missing/Incomplete/Inaccessible | 13 |
| Notice of Application | 1 |
| PPE | 1 |
| Decontamination | 2 |

Education and Outreach



During the state fiscal year, ESD Compliance staff, along with Agricultural Consultation and Training staff (ACT), conducted fourteen Pesticide Safety Train-The-Trainer Workshops in English and Spanish for new trainers and those with expired certificates. The worker only TTT course developed and presented in the Yuma area for labor contractors that only employ workers continues to be well received. Overall attendance neared 250 people.

Pesticide Safety Train-The-Trainer Workshops

| City/Town | Course Category | Date | Language | No of Attendees |
|-----------|-------------------------|--------------------|----------|-----------------|
| Marana | Full Day | August 14, 2018 | English | 18 |
| | | August 15, 2018 | Spanish | 9 |
| | ½ Day Refresher Course | August 16, 2018 | English | 19 |
| Maricopa | ½ Day Refresher Course | September 4, 2018 | English | 10 |
| | Full Day | September 18, 2018 | English | 27 |
| Yuma | Full Day | October 10, 2018 | English | 20 |
| | | October 11, 2018 | Spanish | 22 |
| | | January 24, 2019 | English | 22 |
| | | January 31, 2019 | Spanish | 14 |
| | ½ Day Refresher Course | October 24, 2018 | English | 28 |
| | | October 25, 2018 | Spanish | 14 |
| | | February 7, 2019 | English | 20 |
| | | | Spanish | 28 |
| Phoenix | Full Day | January 24, 2019 | English | 26 |
| | | January 31, 2019 | Spanish | 12 |
| | ½ Day Refresher Course | February 7, 2019 | English | 12 |
| | | | Spanish | 2 |
| Surprise | Refresher – Golf Course | April 30, 2019 | English | 12 |
| Willcox | ½ Day Refresher Course | May 10, 2019 | English | 11 |

Annual Recertification & Training Courses were held across the state. Pest control advisors, certified applicators and responsible parties for pesticide sellers were able to obtain three or six hours of continuing education. Three hours for attending in the morning or afternoon only and six hours for attending the full day course. Courses covered the new formulations of old products and the specific label requirements including sprayer cleanout; Worker Protection Standard – Central Posting, Respirator Use and Decontamination; pollinator protection, Regulatory issues - 1080's, employers responsibilities, WPS Change Update: and as always ending with a game of Jeopardy to review all that was covered during the day. There were additional topics touched on that were important for the safe use of pesticides.

| <i>Annual Recertification & Training Courses</i> | | | <i>No. of Attendees</i> |
|--|---|---------|-------------------------|
| December 5, 2018 | Annual Recertification & Training Courses | Safford | 49 |

| | | | |
|-------------------|---|----------|----|
| December 12, 2018 | Annual Recertification & Training Courses | Yuma | 71 |
| December 13, 2018 | Annual Recertification & Training Courses | Maricopa | 90 |

Compliance Inspection Staff Events

Inspector training and development is crucial to improving knowledge for inspections conducted. For maintaining EPA, FDA and USDA credentials, ongoing or annual training is required. It is essential for new inspection staff, giving them the opportunity to learn on the job. State and Federal laws change and the need to update skills and experience helps to provide expertise in the programs ESD has been authorized to inspect. The inspection staff is responsible for multiple programs and training helps to extend or enhance their knowledge so they can competently conduct inspections and ensure everyone is up to speed with current regulations.

| Staff Attended Training/Conferences | | |
|--|--|-----------------|
| Date | Course Name | Location |
| Quarter 1 - July - September 2018 | | |
| July 3, 2019 | EPA Refresher Training | Online Course |
| July 13, 2018 | Webinar - Labeling Seed According to the Federal Seed Act | Webinar |
| July 19, 2018 | WPS Video RECORDING Production - AZDA & | YUMA |
| July 24, 2018 | Country of Origin Labeling Inspection Training | Online Course |
| July 24, 2018 | Labeling Requirements Applicable to Repackaging of Pesticides | Webinar |
| July 30, 2018 | AAFCO Label Guidance | Webinar |
| July 31, 2019 | Tribal Inspector Training | Parker, AZ |
| August 13-17, 2018 | CGMP For Animal Food Regulators Class | Minneapolis, MN |
| August 19-22, 2018 | Clear Training | Denver, CO |
| August 28, 2018 | Integrated Pest Management: Strategies for Pollinator Habitat Promotion and Conservation in Agricultural Areas | EPA Webinar |
| September 10-14, 2018 | FSPCA -PREVENTATIVE CONTROLS FOR ANIMAL FEED | Online Course |
| September 9-13, 2018 | PIRT Training | Asheville, NC |
| September 24-28, 2018 | Basic Inspector Training | Harrisburg, PA |
| Quarter 2 – October - December 2018 | | |
| October 21-27, 2018 | VM220 - FDA Course - VM220 Preventive Controls (PCs) for Animal Food Regulators | Omaha, NE |
| October 15-19, 2018 | VM 102 - CGMP For Animal Food Regulators Class | Omaha, NE |
| November 13, 2018 | How to Request Pesticide Incident Data | NPIC Webinar |
| November 13-18, 2018 | EPA Inspector Training | San Francisco |
| November 30, 2018 | IPM Coordinating Committee | Maricopa |
| Quarter 3 - January - March 2019 | | |
| January 2, 2019 | Harassment Training - State | Online |
| January-19 | EPA Refresher Training | Online |
| January 8-10, 2019 | Apiary Inspectors of America | Tempe |
| January 15, 2019 | Intro to Gmail and Calendar | Webinar |
| January 15, 2019 | Intermediate Gmail and Calendar | Webinar |
| February 21, 2019 | Southwest Ag Summit | Yuma |
| March 12, 2019 | Paraquat Training | Online |
| Quarter 4 - April - June 2019 | | |

| | | |
|------------------------|--|----------------|
| April 3, 2019 | AZ Statewide Vector Control Meeting | Maricopa |
| April 11, 2019 | Chemical Safety: Training for Community Health Workers | Webinar |
| April 20, 2019 | BSE Inspection Course - VM213W100 | Online |
| April 23, 2019 | EPA Refresher Training | Online |
| April 29 - May 2, 2019 | C & T Pesticide Regulatory Education Program | Arlington, VA |
| May 8 - 9, 2019 | Desert Ag Conference | Phoenix |
| May 13-16, 2019 | Pesticide Inspector Residential Training | Washington |
| May 14, 2019 | Unusable Pesticide Event | Yuma, AZ |
| May 19, 2019 | Unusable Pesticide Event | Maricopa |
| June 17-21, 2019 | AAFCO Advanced Inspector Training | Montgomery, AL |
| June 18, 2019 | Non-Criminal Justice Information Training Program | DPS Phoenix |

Non-Food Quality Assurance

Environmental Services Division inspectors also are responsible for the Non-Food Quality Assurance program inspections (feed, fertilizer, pesticide and seed). Inspection staff collect samples of animal feed, fertilizer, pesticide and seed products in the marketplace. Marketplace inspections can be conducted at potentially any facility that sells or distributes these products. Inspection staff check product labels to ensure proper registration and proper company licensing in Arizona.

A "Cease and Desist" order and "Warning Letter" are issued if a product does not pass laboratory analysis or if found unlicensed or unregistered. They can also be issued for other label related concerns. For seed and fertilizer, there can also be penalties associated with failing products.



Consumer Protection Samples Collected in FY 2019

| Sample Type | Collected | Analyzed | Failure (%) |
|-----------------------|-----------|----------|-------------|
| Feed | 88 | 135 | 8 |
| Fertilizer | 90 | 224 | 4 |
| Water | 19 | 79 | 18 |
| Pesticide Formulation | 79 | 91 | 36 |
| Pesticide Residue | 15 | 37 | 32 |
| Seed | 30 | 125 | 2 |

Marketplace Inspections and Sampling Enforcement Actions

| QUALITY ASSURANCE FAILURES CASES | NO. | QUALITY ASSURANCE FAILURES CASES | NO. |
|---|-----|--|-----|
| Feed Failures | 22 | Pesticide Failures | 19 |
| Raw Feed Failures (<i>e-coli</i> , <i>salmonella</i> etc.) | 0 | All Pesticide Failures are Sent to EPA | 19 |
| Fertilizer Failures | 8 | Seed Failures | 2 |
| <i>Total Number of Cases Initiated</i> | | 51 | |

| Marketplace Inspections Enforcement Actions | NO. | Marketplace Inspections Enforcement Actions | NO. |
|---|-----|---|-----|
| | | | |

| | | | |
|---|----|---|------------|
| Feed Companies Unlicensed | 23 | Seed Dealers Unlicensed | 0 |
| Consumer Feed Complaints | 2 | Seed Labelers Unlicensed | 1 |
| Complaints Dismissed | 0 | Seed Products w/Expired Labeling | 1 |
| Fertilizer Companies Unlicensed | 7 | Pesticide Companies/Products Unregistered | 3 |
| Fertilizer Specialty Products Unregistered | 38 | | |
| Total | | | 76 |
| <i>Total Number of Cases Initiated</i> | | | 89 |
| Total Number of Cease & Desist Orders and Warnings Issued for Sampling Failures and Marketplace Inspection Enforcement Actions | | | 267 |

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



Pesticide Container and Containment Inspections

Since 2011 container and containment inspections are required by the Environmental Protection Agency (EPA). Working under a Program Partnership Grant with the EPA, Department staff inspect pesticide retailers that repackage pesticides, commercial applicators and custom blenders. Those retailers must comply with federal regulations if they handle agricultural pesticides and have a stationary container or pesticide dispensing area itemized in the regulations. The regulations and inspections help ensure the facilities are being maintained properly.

Pesticide Producer Establishment Inspections

The Department's Program Partnership Grant with the Environmental Protection Agency (EPA) requires Agency staff to inspect pesticide producer facilities. The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requires production of pesticides and pesticidal devices that indicate they control, repel or mitigate pests, in a registered establishment. Companies that produce pesticides, pesticide active ingredients or devices, including companies that import these items into the United States, must register as a pesticide producing establishment and file production reports with the EPA. FIFRA definition of "production" includes formulation, packaging, repackaging and relabeling of any pesticide product or device. Production in an unregistered establishment is a violation of FIFRA.

Groundwater Protection

The Arizona Department of Agriculture inspection staff collected groundwater samples in Yuma, Maricopa and Graham counties in May, 2018. More than 100 AIs are looked for in the 16 samples gathered. The analyses is for the active ingredients on the state's groundwater protection list and the pesticides of interest list from the EPA. The State Agriculture Laboratory does the analysis. The funding for the analysis has been provided by the US EPA through the agency's Program Partnership Grant. Working as a team with ADEQ, all new agricultural use products are reviewed before registration to ensure the state's groundwater resources are protected.

Bovine Spongiform Encephalopathy Inspections (Mad Cow Disease)

A total of 27 inspections were submitted to the Food and Drug Administration (FDA) (1 was found to no longer be in business). The field staff working under a federal contract with the FDA conducts these inspections of feed manufacturers, dairies, feed yards, trucking companies and dealers. Bovine Spongiform Encephalopathy (BSE) Inspections are conducted to assess compliance with federal regulations regarding animal feed and their ingredients. This is to ensure the health and safety for both ruminants and human consumption.

Country of Origin Labeling (COOL)

For the eighth year, the division worked under a federal contract with USDA Agricultural Marketing Service and hired a part-time inspector to conduct inspections under the program. Inspections are conducted at assigned marketplaces, mainly grocery stores, across Arizona checking for compliance with the federal



Country of Origin Labeling (COOL) requirements. The COOL regulations apply to fresh and frozen, fruits and vegetables, fish and shellfish, goat, lamb/mutton, chicken, and ginseng, peanuts, pecans and macadamia nuts. Products must bear labeling or have signs conspicuously posted, indicating the country of origin for the commodity as defined by the law. Meats must also have where they were born, raised, and processed. Fish and shellfish are also required to be labeled as to whether or not they are wild or farm-raised. A total of 5 follow-up inspections took place at businesses that previously were inspected and had some non-

compliant issues and 71 initial inspections (One was out of business.) Follow-up inspections are more involved and require the stores to provide records showing where they obtained the products and the country of origin.

Pest Management Division (PMD)

INSPECTIONS

Pesticide Use Inspections

One of the duties of PMD Compliance is to perform Pesticide Use Inspections (aka Use Inspections). These inspections involve monitoring an applicator applying, storing or disposing of a product. PMD believes that monitoring compliance protects the public by reducing the number of pesticide misuses. The number of Use Inspections performed for FY 2019 amounted to **1298**. **The categories of inspections were as follows:**

| | | |
|---|------------------------------|-----|
| 1 | General Pest / Public Health | 743 |
| 2 | Wood Destroying | 274 |
| 3 | Turf and Ornamental | 158 |
| 4 | Antimicrobial | 57 |
| 5 | Right of Way / Weeds | 54 |
| 6 | Fumigation | 3 |
| 7 | Aquatic Pest | 9 |

Non-Use Inspections

Non-use Inspections are inspections that do not involve the actual “monitoring of pesticides”. They are inspections of pesticide treatment records at the business licensee’s office or at a food, healthcare, school or child care facility to ensure individuals servicing such accounts are licensed (as required by law). Such inspections also involve vehicle inspections (ensuring labels, safe working equipment and personal protective equipment are onboard), office records (e.g. dates employees licensed) **PMD compliance staff conducted 1147 non-use inspections. The categories of inspections were as follows:**

| | |
|--|-----|
| Office Inspections | 476 |
| Vehicle Inspections | 343 |
| Certified applicator treatment records | 75 |
| Child Care visits | 121 |
| School Visits | 63 |
| Health Care Inspections | 9 |
| Food Handling Establishments | 4 |
| Other | 56 |

Consumer Protection Monitors

Inspectors utilize Pretreat Tag Monitors, 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, because it does not involve them, unless a violation is found. The inspector visits newly constructed areas, views the pretreatment tag the applicator is required to attach to the site after pretreatment. Then, the inspector measures the site, calculates the amount of termiticide that should be applied and compares his findings with the information the applicator documents on the tag. The inspector use 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 performing the treatment is reporting the treatments to the Office as required by Law. **In FY 2019, of the PMD inspectors performed 196 Consumer Protection Monitors.**

Investigations

The Division conducted 111 inquiry investigations in FY 2019. Inquiries, threshold investigations, are basically preliminary investigations. They take 30 to 60 calendar days and provide information for Compliance staff to determine if there is evidence of a violation. Inquiries come from consumers, licensees, agency Staff or referrals from the EPA or other State or local government agencies. If violations are found, the inquiries then become complaints. The inquiry categories were as follows in Fiscal Year 2019:

| Category | Inquiries Open |
|--------------------------------|----------------|
| WDIIR | 5 |
| Unlicensed | 36 |
| TARFS | 15 |
| Records | 10 |
| No QP | 4 |
| 90 day certification violation | 1 |
| Misuse | 27 |
| No insurance | 11 |
| Final grade violation | 1 |
| Valleywide Termite | 1 |

Complaints

PMD issues a citation only after the Associate Director, Attorney and the Agency Director have conducted a review of the investigative report and have determined that a violation meriting disciplinary action has occurred. To maintain consistency, the Associate Director utilizes Enforcement Response Protocols (ERP) located in the back of the Arizona Administrative Codes. By utilizing the ERP the Associate Director is able to recommend discipline to the Agency Director that is unbiased and uniform. Penalties may include a warning, suspension or even civil penalties of up to \$1000 for egregious violations. **In FY 2019 the PMD completed 50 complaints.**

The categories for the complaints are as follows:

| Category | Complaints Completed |
|-------------------------|----------------------|
| WDIIR | 6 |
| Unregistered applicator | 1 |
| Unlicensed | 24 |
| TARF | 2 |
| Record Violations | 7 |
| QSD | 1 |
| No QP | 4 |
| Misuse | 5 |

Consumers can visit <http://www.sb.state.az.us/ComplaintSearch.php> and view the complaint history of any respondent whom the PMD has opened and resolved a complaint.

| <u>Type of Disciplinary Action</u> | <u>Number</u> |
|--|--------------------|
| Administrative Warnings | 25 |
| Civil Penalties | \$27,925.00 |
| Number of cases that involved Civil Penalties | 40 |
| License Suspensions | 0 |
| License Revocations | 0 |
| Dismissals | 6 |
| Cease and Desist Orders | 27 |

Continuing Education Applications

Individuals holding an applicator certification and those holding a certified qualified applicator license are required to obtain 6-hours of Continuing Education (CE) and 12 hours of CE respectively per year. While commercial CE providers offer training on new pesticide technologies, equipment, application techniques, and business practices, PMD staff offered training regarding Rules and Statutes (e.g. applicator and qualifying party responsibilities, proper record keeping). **In FY2019 compliance staff reviewed and approved PMD 769 CE applications, approving 767 and denying 2. The average amount of time it takes to approve the applications is 5.11 days. Compliance staff also reviewed and approved 379 AG CE applications, approving 363 and denying 6. The average amount of time it takes to approve the applications is 5.11 days.**

PMD provided 4 CE classes in Phoenix, Tucson, Yuma and Prescott to total of 434 applicators.

Initial Licensing Training

Initial Licensing Training (ILT) helps pre-testers better understand the aspects of pesticide, the environment and pesticide labels. PMD Compliance offered **3 ILT courses** to a total of **39 attendees**.

Industry Outreach

In FY2019 PMD staff spoke to industry members or participated in CE classes, addressing the new Laws and Rules and the agency's organizational structure. **Staff provided Laws and Rules education to a total of 869 license holders and supervisory staff regarding various topics related to the agency, the PMD and rules and statutes, for which it regulates.**

School and Childcare Visits

State law requires 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 63 schools and 121 child care facilities** as a form of outreach to stress that pesticides should only be applied by appropriately licensed persons and that employees, students and parents were provided the proper information and warnings of impending pesticide treatments.

State Agricultural Laboratory

The Arizona Department of Agriculture State Agricultural Laboratory (SAL) 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 follows a stringent quality assurance program.

During the past spring, the Department’s laboratory re-located to the City of Chandler, where all its employees are under one roof again for the first time since 2010. The table below illustrates the type of testing conducted:

| Service | Capability |
|--------------------------------------|-------------------|
| Entomology – M | c |
| Entomology – PCR | c |
| Seed – Export | c |
| Seed – Regulatory | C |
| Brucellosis – Milk | C |
| Food Safety – Meat | C |
| Food Safety – Specialty Crops | c |
| Dairy Microbiology | C |
| Dairy Antibiotics | c |
| Dairy Pesticides | c |
| Dairy Aflatoxin | c |
| Animal Feed | C |
| Pet Food | C |
| Fertilizer | C |
| Pesticide Formulations | C |
| Forensic Analysis - Chemical Residue | C |
| Hemp – Total THC | 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 this pest is currently listed as eradicated from Arizona.

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.

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 International Organization for Standardization (ISO) accreditation for laboratories providing regulatory testing. The evolving standard for laboratories similar to SAL is ISO 17025:2017. As federal agencies complete the implementation of ISO accreditation for their own labs, it is anticipated that the federal agencies will require state laboratories to become similarly accredited. Such accreditation is expensive and time intensive; SAL has applied for a grant to aid it in achieving ISO accreditation for some of its testing protocols in the coming year.

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. Such audits, combined with analyst participation in an annual proficiency testing program, ensure the quality of the analyses conducted by the dairy microbiology laboratory.

In addition, the laboratory is audited by the United States Department of Agriculture (USDA) of the laboratory's meat pathogen testing program. Similar audits will be necessary when the laboratory becomes accredited to the ISO 17025:2017 standard.

The Environmental Protection Agency (EPA) performs audits of the SAL quality assurance program as a function of the cooperative agreement between AZDA and EPA for the regulation of pesticides in AZ.

Laboratory Certification

The State Agricultural Laboratory provides for the mandatory certification of laboratories providing agricultural laboratory services to agencies and departments of this state or its political subdivisions, including those laboratories that are a part of any state agency. Laboratories interested in certification by the State Agricultural Laboratory may visit our Laboratory Certification page at [AZDA Laboratory Certification](#).

Laboratory Approval

Scientists from the State Agricultural Laboratory are certified by the U.S. Food and Drug Administration as Laboratory Evaluation Officers. As such, they provide FDA mandated audits and inspections of dairy testing laboratories. When compliance is reached, the laboratories achieve Approved status for testing.

Reference Standards and Reference Materials

Certified reference materials and internal quality control protocols 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 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 pathogen analyses required 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, mycotoxin sample PTP by the American Oil Chemists Society, pesticide residue sample PTP by the Food Emergency Response Network, and total THC sample PTP by the University of Kentucky.

Animal Disease Detection

The laboratory 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.

Food Safety

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

The U.S. Food and Drug Administration 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

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 AZDA or other regulatory investigators and delivered to the laboratory utilizing stringent chain of custody procedures. Sample types received include pet food, water, soil, produce, foliage, animal tissues, air, clothing and surface swabs. Complicating the analytical testing process are the ~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 commercial 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.

Weights and Measures Services Division

The Weights and Measures Services Division strives to protect the integrity of Arizona's marketplace by ensuring that equity and accuracy are preserved for consumers and sellers. The Division educates businesses about regulations and helps those businesses comply on an equitable basis.

Primary Responsibilities

- Preserve and defend the measurement standards by which all commerce is built upon in order to deliver fair competition in the Arizona marketplace.
- Ensure that commercial devices (scales, fuel meters, liquid petroleum gas, etc.) used for the sale of commodities by weight, measure or count are licensed and accurate.
- Work to prevent unfair dealing by weight, measure or count and conduct regular inspections and investigations of potential fraud in commodities.
- Maintain the state's primary standards (those measurements upon which all other measurement are based).
- Ensure accuracy and proper labeling of products sold by weight, measure or count (a gallon of gas is a gallon; your breakfast cereal weighs 20 oz. as stated on the package, etc.).
- Conduct regular inspections to ensure that prices are posted and items scan at the correct price.
- License weighmasters who are responsible for weight certification at truck stops and other locations for interstate commerce purposes.
- Manage the Arizona Cleaner Burning Gasoline and the vapor recovery air quality programs.

Major Accomplishments

Reorganization and Focus on Training

- The division reorganized to have three Team Leads in the field. The Team Leads are responsible to conduct inspections 50% of their time and work with their assigned investigators and perform office work the remaining 50%. The goal of the reorganization is to improve consistency and have closer awareness of field activities without sacrificing the number of inspections completed.
- Devoted over 730 hours training staff in fueling device, propane, UPC, packaging, and method of sales courses developed and/or taught by the National Institute of Standards and Technology.
- We have challenged staff and offer a \$500 stipend for each National Conference on Weights and Measures (NCWM) certification exam they pass. This fiscal year we increased the number of certificates held by investigators from 3 to 14.

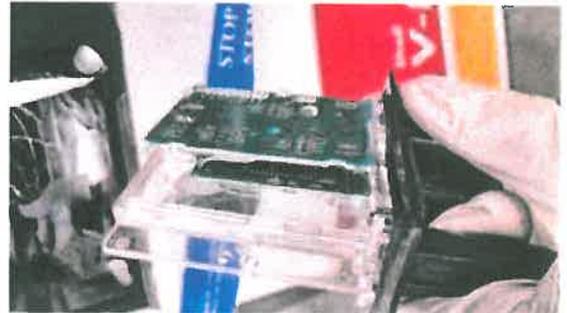
Continued Focus on Underserved Inspection Types

- The division has a renewed focus on conducting inspections that have not been performed on a routine schedule to better serve and protect consumers in the marketplace. These inspections include packaging, high flow diesel, propane, and large scales.
- We implemented a breakthrough project in FY18 to double the number of these underserved inspection types from 2,500 to 5,000. In FY 19 we exceeded our goal with the completion of 5,442 device inspections.
- We have maintained our rates for the other inspection types. In fact, we inspected more devices this fiscal year than any previous years.

Continued Focus on Skimming Devices

In December 2015, there was an increase in number of credit/debit card skimming devices identified in gas dispensers. Skimmers are used by criminals to steal consumer credit/debit card information. The agency increased the number of inspections and worked with stakeholders to address this growing problem. During this fiscal year 164 skimming devices were found by or reported to the Division. This fiscal year the division:

- Promoted a rule requiring reporting when skimming devices are found by licensed service personnel.
- Continued targeted surveys to inspect for skimming devices in high-risk areas.
- Continued communications between law enforcement, the banking industry, gasoline retailers and the general public when skimmers have been found.
- Maintain statewide information regarding skimmers identified in Arizona.



Successful Removal of Stage II Vapor Recovery Equipment

HB 2128, passed April 2014, requires more than 1,000 gasoline stations located in the Maricopa County region to remove stage II vapor recovery control during a 2-year period starting October 1, 2016. We successfully completed the removal of the stage II vapor recovery at all of the gas stations by the deadline of September 30, 2018.

Finalized Rulemaking

We completed a rulemaking to allow the use of isobutanol as an oxygenate in gasoline in accordance with House Bill 2368 and update to the latest versions of NIST Handbooks 44, 130, and 133. The final rule was published September 28, 2018.

Performance Numbers Fiscal Year 2019

| Overview: | Detailed Highlights: |
|-------------------------------------|----------------------------------|
| Inspections conducted: 10,191 | Total Devices Tested: 46,536 |
| Number of Devices Licensed: 127,596 | Gas Pump Tests Conducted: 31,048 |

| | |
|---|--|
| Consumer Complaint Inspections: 1,182 sites 2,090 devices checked | Scales Tested: 4,790 |
| Civil Penalties Issued: 492 | Price Posting/UPC Inspections: 3,409 |
| Civil Penalty Amount Assessed: \$264,300 | Fuel Quality Samples Analyzed: 1,702 |
| | Dispenser checked for skimmers: 3,150 |
| | Skimmers Reported/Found: 164 |
| | Overall Site Compliance Rate: 87% Pass |

