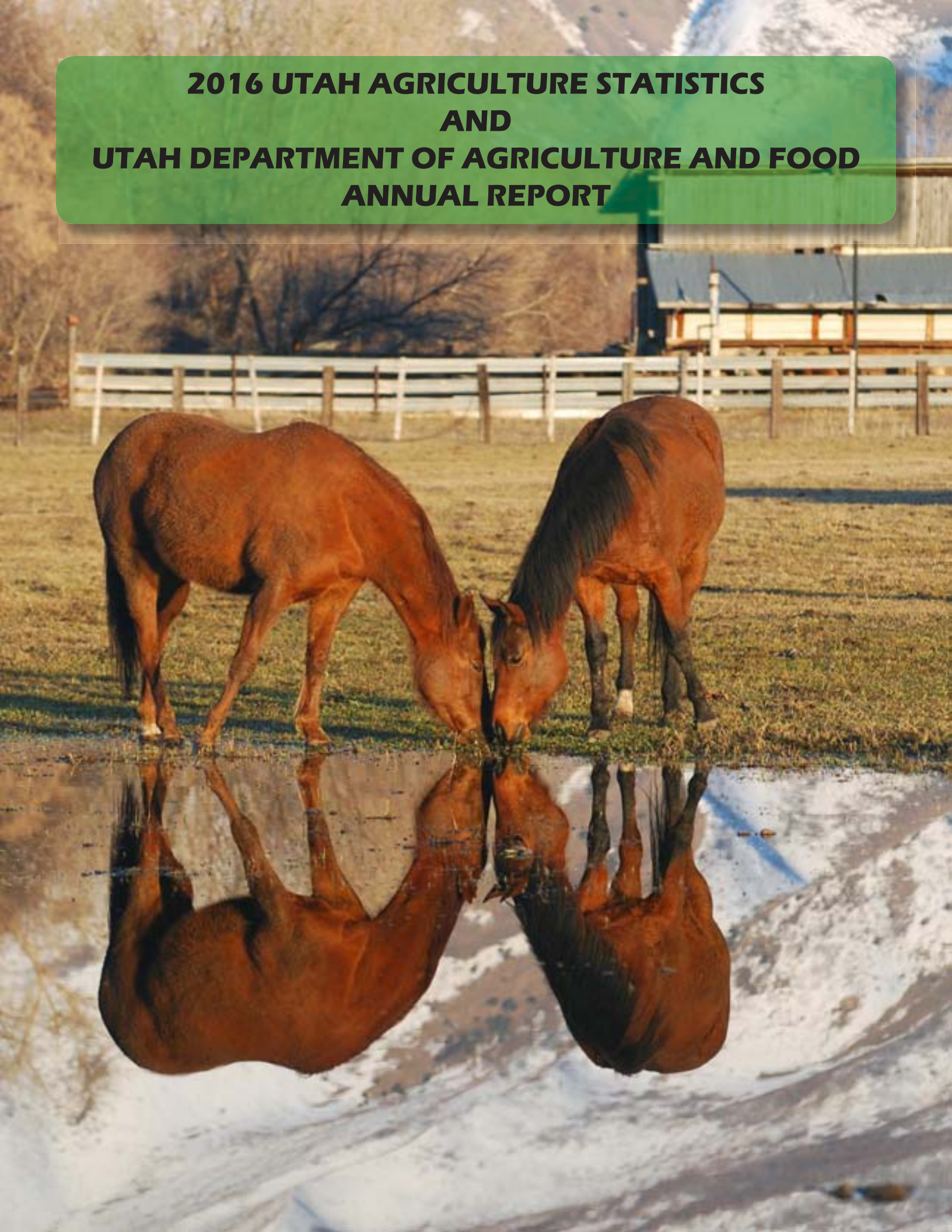
2016 UTAH AGRICULTURE STATISTICS AND UTAH DEPARTMENT OF AGRICULTURE AND FOOD ANNUAL REPORT



STATE OF UTAH

GARY R. HERBERT
GOVERNOR

OFFICE OF THE GOVERNOR
SALT LAKE CITY, UTAH
84114-2220

SPENCER J. COX
LIEUTENANT GOVERNOR

Governor's Letter

As governor, it is my pleasure to present this report on the status of agriculture in Utah. The Utah Department of Agriculture and Food is one of our oldest state agencies and throughout the years has worked diligently with our farmers and ranchers to support their important work.

Agriculture and the food production industry are responsible for more than 14 percent of the state's economy and generate approximately 78,000 jobs. Sales of locally grown food have reached nearly $20 million a year and continue to grow.

Through our conservation planning, farms help maintain productive farm lands and dynamic ecosystems. Likewise, well-managed livestock grazing not only helps sustain healthy rangelands, watersheds and wildlife habitats, but helps control the spread of invasive weeds and reduce the threat of catastrophic wildfires.

I was pleased to recognize the Utah Department of Food and Agriculture's Livestock Inspection Program for Outstanding Public Service during the 2016 Governor's Award for Excellence ceremony. The program has experienced marked improvement in identifying and reducing livestock theft while simultaneously promoting animal health.

Additionally, the National High School Rodeo Finals were won by the Utah Girls Team, who placed first overall, continuing a trend of numerous victories spanning the past several years. In large part, this victory can be attributed to the work ethic and culture of our strong agricultural community in Utah.

I believe the best is yet to come for our state and for the thousands of family-run farms in Utah. Thank you for supporting Utah agriculture and recognizing the important role this industry plays in our state's future.

Sincerely,

Gary R. Herbert
Governor

Introduction

The Utah Field Office of the Mountain Region of USDA's National Agricultural Statistics Service (NASS) and the Utah Department of Agriculture and Food (UDAF) are proud to present the 44th edition of this publication. Copies of the publication are also available on both organizations' Internet sites. This publication is provided to help inform farmers, ranchers, and the public about activities within UDAF and provide a detailed look at Utah's agricultural production. Also included are budgets for helping farmers and ranchers evaluate the potential profitability of various agricultural commodities.

Cooperation from farmers, ranchers, and agribusinesses responding to various survey questionnaires is essential for quality estimates; their cooperation make this publication possible. We thank them for their help and willingness to provide the data needed to produce these statistics.

This report would not be possible without the dedicated effort of our field and telephone enumerators who collect this data. We thank them for their diligence and professionalism.

Estimates presented are current for 2015 production and January 1, 2016 inventories. Data users that need 2016 production information, or additional historic data, should contact the Utah Field Office at 801-524-5003 or toll free at 1-800-747-8522.

State and U.S. statistics are available on the NASS Web page at http://www.nass.usda.gov/. Use the "Quick Stats" utility to search for current or historic data by clicking the Data and Statistics tab.

Prior year estimates are subject to revision and may have been revised in this publication. Data users should use this publication for previous years' data and not go back to earlier publications for those data.

The following agricultural Web pages may interest you.

Organization	Web Page Address
U. S. Department of Agriculture (Includes links to all USDA Agencies)	http://www.usda.gov/
USDA – NASS	http://www.nass.usda.gov/
USDA - NASS Census of Agriculture	http://www.agcensus.usda.gov/
USDA - Utah Agricultural Statistics	http://www.nass.usda.gov/ut/
Utah Department of Agriculture and Food	http://ag.utah.gov/
National Association of State Departments of Agriculture (NASDA)	http://www.nasda.org/
Food and Agricultural Policy Research Institute	http://www.fapri.missouri.edu/
CME Group	http://www.cmegroup.com/
Salt Lake City National Weather Service	http://www.wrh.noaa.gov/slc/
Western Regional Climate Center	http://www.wrcc.dri.edu/
Utah Climate Center	http://climate.usurf.usu.edu/
USU Extension Service	http://extension.usu.edu/
Utah Agriculture in the Classroom	http://utah.agclassroom.org/
Utah Farmers Union	http://www.utahfarmersunion.com/
Utah Farm Bureau	http://www.utahfarmbureau.org/
Utah Cattlemen's Association	http://www.utahcattlemen.org/
Utah Wool Growers Association	http://www.utahwoolgrowers.com/
Utah Dairy Council	http://www.utahdairycouncil.com/

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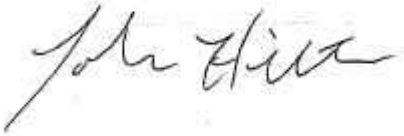
Sincerely,



John Hilton, State Statistician
Mountain Region, Utah Agricultural Statistics

UTAH AGRICULTURAL STATISTICS AND UTAH DEPARTMENT OF AGRICULTURE AND FOOD 2016 ANNUAL REPORT

Compiled by the

United States Department of Agriculture National Agricultural Statistics Service Mountain Region, Utah Field Office

John Hilton, State Statistician
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Issued cooperatively by

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Hubert Hamer, Administrator
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William Meyer, Regional Director, Mountain Region

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UTAH DEPARTMENT OF AGRICULTURE AND FOOD ANNUAL REPORT

Utah Department of Agriculture and Food

Administration

LuAnn Adams	Commissioner
Scott Ericson	Deputy Commissioner
Larry Lewis	Public Information Officer
Kathleen Mathews	Executive Assistant
Melissa Ure	Policy Analyst
Andy Pierucci	Policy Analyst

Division Directors

Vacant, Director	Administrative Services
Cody James, Director and Brands Bureau Chief	Animal Industry
Dr. Barry Pittman	State Veterinarian
Dr. Weston Judd, Director and State Chemist	Laboratory Services
Wayne Bradshaw, Director	Marketing & Econ. Development
Robert Hougaard, Director	Plant Industry & Conservation
Travis Waller, Director	Regulatory Services
Chad Heuser, Director	Wildlife Services

Agricultural Advisory Board

Chairman	Kent Bushman, Utah Farmers Union
Vice Chairman	Ron Gibson, Utah Farm Bureau
Ron Stratford	Utah Dairymens Association
Matt Mickel	Utah Wool Growers Association
Joe Fuhriman	Utah Cattlemens Association
Jared Gaetz	Food Processing Industry
Rusty Bastian	Food Supplement Manufacturers
Matt Bartlett	Utah Horse Industry
Bob Barry	Utah Assn. of Conservation Districts
Scott Robins	Livestock Auction Marketing Association
Marilyn Albertson	Consumer Affairs Representative
Dr. Roger Rees	Utah Veterinary Medical Association
Allison Fiscus	Utah Pork Producers Association
Cliff Lillywhite	Egg & Poultry Producers
Matt Cook	Utah Turkey Industry
Robert McMullen	Utah Fruit and Vegetable Association
Luke Petersen	Urban and Small Farms
Randy Marriott	Utah Elk Breeders Association
Jerry Stoddard	Utah Beekeepers Association
Chris Falco	Utah Fur Breeders Association
Ken White	Utah State University College of Agriculture

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Internet: http://ag.utah.gov - email: agriculture@utah.gov

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Deputy Commissioner	538-7102
Administrative Assistant	538-7103
Public Information Officer	538-7104
Policy Analyst	538-4976
Policy Analyst	538-7190
Administrative Services	
Director	538-7110
Budget and Accounting	538-7032
GIS	538-9904
Marketing and Development	
Director	538-7108
Utah's Own Director	538-7141
Marketing Specialist	538-4913
Livestock & Market News	435-230-0402
Animal Industry	
Director	538-7166
State Veterinarian	538-7162
Field Veterinarians	538-4910
Animal Health (import permits)	538-7164
Animal Health Desk	538-7161
Brand Bureau Chief	538-7166
Animal Identification (brands)	538-7137
Aquaculture	538-7046
Elk Program	538-7173
Meat Inspection	538-7117
Chemistry Laboratory (effective Jan, 2017)	
Director	816-3833
Dairy Testing Laboratory	816-3843
Meat Laboratory	816-3845
Feed & Fertilizer Laboratory	816-3846
Pesticide Residue Laboratory	816-3847
Plant Industry	
Director	538-7180
Deputy Director	538-7188
Entomology	538-7184
Fresh Fruit & Vegetable Inspection	435-757-3726
Seed, & Fertilizer	538-7187
Grain Grading Lab (Ogden UT)	801-392-2292
Insect Infestation Emergency Control	538-7184
Noxious Weeds & Feed	538-7186
Organic	435-636-3234
Pesticides	538-7183
Seed Laboratory	538-7182
Groundwater	538-9905
Grazing Improvement Program (GIP)	435-279-3603
Utah Conservation Commission - Deputy Dir	538-7120
Ag. Loans	538-4953 or 538-7179
Ag. Certificate Environmental Stewardship (ACES)	538-7174
Regulatory Services	
Director	538-7150
Bedding, Quilted Clothing, & Upholstered Furn.	538-7151
Dairy Compliance	538-7145
Egg & Poultry Compliance	538-4943
Food Compliance	538-7149
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Metrology (measurement) Laboratory	538-7153
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Weights & Measures	538-7158

Commissioner of Agriculture
and Food
LuAnn Adams

Thank you for your interest in Utah agriculture

I am proud to report on Utah agriculture's growing contribution to Utah's economy. Thanks to a healthy foreign market, Utah's agricultural exports have grown for a fifth year in a row, hitting a record $528 million in 2014; the latest numbers available. Our farmers and ranchers produced nearly $2.0 billion in raw food products and hay that eventually become food in the grocery store, restaurants, and at farmers markets and roadside stands.

I see many Utahns embracing the value of our agricultural industry. More people are seeking out locally grown foods and speaking up to protect our farmlands as the threat of urban sprawl takes aim at some of our most productive lands along the Wasatch Front. I applaud Utah County for working with a diversity of stakeholders to take the lead in developing a toolbox of options to help agriculture coexists alongside an expanding population. Why Utah county? Utah County is routinely the most productive agricultural area in the state often generating more than $200 million in revenue each year; it is also home to one of the fastest growing populations in Utah. This is creating a most unfortunate perfect storm that is brewing in Utah.

Recently, stakeholders developed two goals for agriculture that are the foundation of what we call an Agriculture Toolbox; First, make and keep agriculture economically and socially viable in Utah County, and second, encourage development patterns and implement measures that support agricultural land and water resources. Within these two goals are dozens of options and opportunities that will help ensure that agriculture remains a vibrant part of Utah County's economic and social fabric. I am excited about this plan, and hope the concept spreads statewide.

I would also like to report that our Department made adjustments to several programs that will improve customer service and reduce operating costs. The statewide SUCCESS initiative challenges agencies like ours to find more efficient ways of conducting long-standing services. One example is in the gasoline station inspection program where improved communication with station operators and uniform enforcement standards have improved compliance rate among stations. Improved compliance means fewer visits by our inspectors. The SUCCESS initiative also helped reduce the number of cattle thefts and improved our dairy farm inspection system.

Thank you for your interest in Utah agriculture, and I invite you to review our annual report to read more about our agency and our agricultural industry.

Sincerely,

LuAnn Adams
Utah Commissioner of Agriculture and Food

Mission Statement

The mission of the Utah Department of Agriculture and Food is to "Promote the healthy growth of Utah agriculture, conserve our natural resources and protect our food supply."
It is also believed that a safe food supply is the basis for health and prosperity. The Department's **Vision Statement** is: To be the recognized guardian of Utah's food supply and sustainable agriculture.

The Department values:

- Integrity and respect
- Service and hard work
- Stewardship and accountability
- Growth and achievement
- People and partnerships
- Heritage and culture

Food safety, public health and consumer protection is a critical and essential function of state government. In order to accomplish this mission, with increased population and industry growth, we are identifying ways and means to fund the regulatory functions of the Department. In addition, we continue to educate the public about the importance of agriculture and the value of maintaining a viable agriculture industry.

We will promote the responsible stewardship of our state's land, water and other resources through the best management practices available. We will promote the economic well-being of Utah and her rural citizens by adding value to our agricultural products. We also aggressively seek new markets for our products, and we will inform the citizens and officials of our state of our work and progress.

Commissioner Adams (left) congratulates Sarah Draper, the National FFA Western Region Vice President for 2016 for being Utah's first female National FFA Officer. Sarah concluded her year in office in October at the National FFA Convention held in Indiana. Sarah is from Corinne, Utah and a Sophomore at Utah State University where she is studying Agricultural Education and Business Management.

In carrying out that mission, Department personnel will take specific steps in various areas of the state's agricultural industry, such as the following:

Regulation

Department operations help protect public health and safety as well as agricultural markets by assuring consumers of clean, safe, wholesome, and properly labeled and measured or weighed products. This includes products inspected by UDAF's animal industry, plant industry, weights and measures, food and dairy inspectors, compliance officers and field representatives. It involves chemical analysis by the state laboratory, which is part of the Department. It also includes other consumer products such as bedding, quilted clothing and upholstered furniture.

This inspection also protects legitimate producers and processors by keeping their markets safe from poor products and careless processing.

Conservation

Through its variety of programs in this area, the Department will work to protect, conserve and enhance Utah's agricultural and natural resources, including water and land, and to administer two low-interest revolving loan funds aimed at developing resources and financing new enterprises.

Marketing and Development

UDAF's marketing section strengthens Utah's agriculture and allied industries financially by expanding present markets and developing new ones for Utah's agricultural products, locally, in the United States, and overseas as well. It also helps develop new products and production methods and promotes instate processing of Utah agricultural products for a stronger state economy.

This annual report is available on the Internet at:
www.ag.utah.gov
Visit our website on your mobile device by scanning this Quick Response code.
Also visit: facebook.com/utahagriculture/
twitter.com/utagandfood/

Commissioner's Office

The Department fulfilled several of its top priorities this year including putting in place internal changes to several of its programs that improved customer service and reduced operating costs. The statewide SUCCESS initiative challenges agencies to find more efficient ways of conducting long-standing services. One example is in the gasoline station inspection program where station compliance has noticeably increased. Inspectors are emphasizing communication with station operators and have adopted standard enforcement protocols that improved consistency.

In 2016 UDAF celebrated the 40th anniversary of its Agricultural Resources Development Loan (ARDL) program. ARDL began in 1976 as a revolving low-interest loan program, and to date has completed more than 2,500 conservation projects that have reduced soil erosion, conserved agricultural water use and improved crop yields. The results have helped keep many family farms and ranches in business while helping rural Utah's economy and environment.

The UDAF Brand Inspection Bureau received the Governor's Award for Excellence April 27, 2016 at the Utah State Capitol. The award for Outstanding Public Service is a result of a reduction in the number of missing livestock in Utah from a reported 728 head in 2013 to 253 head in 2015. That's a 65 percent reduction in two years. Inspectors increased their visibility with new marked vehicles and by posting surveillance signs on fences and gates in range areas. The Brand Bureau has also conducted educational courses and seminars for interested audiences.

The UDAF Brands Program received the 2016 Governor's Award for Excellence in April at a ceremony at the State Capitol. Pictured left to right are: Anna Marie Vail, Shawn Judkins, Dave Oberhansley, Shyrel Baker, LaJeanne Gilgen, Lt. Governor Spencer Cox, Division Director, Cody James, Don Lindsay, Matt Bailey, Thane Marshall, Dave Carter, UDAF Commissioner, LuAnn Adams.

The Grazing Improvement Program (GIP) conducted several Grazing Resolution conferences during 2016 designed to resolve conflicts between Utah livestock producers and federal land managing agencies. The conferences came in the wake of rising tension in the West between producers and the U.S. Bureau of Land Management and U.S. Forest Service due to decreasing grazing allotments and other related issues.

Utah's Own launched a broad advertising campaign to build increased awareness of the many benefits of the program. Well placed billboards and beautifully produced commercials conveyed a positive message about Utah's family farms and fresh locally grown foods. See the video: http://bit.ly/2dw6w2o
The program helps agricultural producers consider adding new crops, adding value to products, and introducing niche marketing possibilities to their existing operations. Creating value added jobs can improve the diversity of a rural economy, increase local income, and capture higher profits. "Like" Utah's Own on Facebook and follow us on Instagram to find quality local products that strengthen Utah's economy.

The Department is organizing a Utah Food Safety Rapid Response Team (RRT) that will coordinate with other state entities to build a food safety infrastructure that would provide a rapid response for all food and animal feed emergencies. The effort is in response to heightened awareness by consumers and food producers of the importance of food safety from the farm to end user. The FDA approved a grant for the RRT, and UDAF is awaiting funding.

Hi-tech agriculture is on display at the UDAF building in Salt Lake City with the construction of an aquaponics demonstration garden. A symbiotic environment of live fish and garden vegetables show how a small production facility can sustain agriculture in the absence of traditional soils. Visit http://bit.ly/2dXHVSc to see the latest video on the garden.

Deputy Commissioner

Scott Ericson
Deputy Commissioner

Scott Ericson is responsible for and coordinates all of the day to day Department activities and works with each division on their program budgets and goals. Scott oversees and coordinates the Department's SUCCESS Program that focuses on measurable results that drive operations and the budgeting process. He also oversees the Utah Horse Racing Commission. Commission sanctioned tracks and races are important in establishing recognized times for Utah quarter horses and contributes to the market value of horses. Scott also promulgates of Department administrative rules. He coordinates the collection of predator assessment head tax. The tax is derived from individual producers, livestock associations, and counties who make voluntary contributions to the program to pay for services to protect livestock from depredating animals. He is also the Treasurer for the Agriculture in the Classroom Program, He is the Department's representative on the state Farmland Evaluation Advisory Committee (Greenbelt). The Greenbelt law assesses and taxes qualified agricultural property on its agriculture production value instead of its commercial market value.

Communications Office

The Communications office is an important link between the public, industry, employees, and other state agencies. The office publishes videos, brochures, articles, newsletters, web pages, as well as creates displays and computer presentations. The office also writes news releases and responds to news media enquires about agriculture and the UDAF. In addition to the printed medium, the office uses video-tape to produce video news releases and video clips that can be viewed at Youtube.com/utahagriculture/ The Department is also active in social media, using Facebook and Twitter. (Facebook.com/utahagriculture and Twitter.com/utagandfood).

The Department launched a redesigned Internet website in 2013. The website is organized to better serve the needs of the thousands of visitors who use the Internet to do business with the State, or simply learn how the historic agency is serving their needs. The website features easy-to-access online services, the latest livestock auction or commodity trading news, pesticide applicator training information, and dozens of other services.

www.facebook.com/utahagriculture
www/twitter.com/utagandfood
The Department's Facebook and Twitter pages are good sources for the latest videos and articles about Utah agriculture.

The Communications Office also interacts with local schools, offering students lessons on the connection between the farm and our food. A complete list of UDAF news releases is available at: www.ag.utah.gov/news.html

Agriculture Mediation

The Department continues to provide services to the agriculture community through its USDA Certified Mediation Program. (ag.utah.gov/markets-finance/utah-agriculture-mediation-program.html) The program assists farmers and ranchers who face adverse actions in connection with USDA programs. Utah is one of 34 certified programs in the country.

Utah farmers and ranchers rely on the Certified State Agriculture Mediation Program to help them through difficult economic times have had this valuable service extended after the passage of the Agriculture Mediation Bill. The program helps farmers and ranchers seek confidential advice and counsel to address loan problems and disputes before they grow to be too much for the producer to handle. The legislation will continue to authorize funding of the Certified State Agriculture Mediation Program for five years. Mediation provides a neutral, confidential forum to discuss complex issues and build strong working relationships with producers, lenders and government agencies.

Agriculture in the Classroom

The mission of AITC is to increase agricultural literacy in Utah by developing a program that improves student awareness about agriculture and instills in students an appreciation for our food and fiber system. This program is necessary because agriculture affects our quality of life and our environment.

The AITC Program receives funds from private donors, state funding sources, and grants. These funds are leveraged to meet the program's mission through teacher training, and classroom materials that effectively and efficiently meet the need to increase agricultural literacy.

Administrative Services Division

The Division of Administrative Services provides support to all divisions within the department to insure state policies and procedures are implemented to meet audits conducted throughout the year by state finance and the state auditor's offices. We have added new federal grants each year, and to date we are tracking more than 30 federal grants. We are responsible for processing more than 450 state grants and contracts annually. Purchasing cards are being used by the majority of the field staff, and few requests for petty cash reimbursements are being requested by employees

Wildlife Services

Chad Heuser
Federal Program Director

The Utah Wildlife Services (WS) program is a cooperative effort between the Utah Department of Agriculture and Food and the U.S. Department of Agriculture. Protecting Utah's agriculture includes protecting livestock, with the majority of the program's effort directed at protecting adult sheep, lambs, and calves from predation.

Funding for the program comes from a number of sources, including State General Fund and Federal appropriations. Livestock producers also contribute through a livestock assessment nicknamed the "head tax" because it is assessed per livestock head. Individual producers, livestock associations, and counties also make voluntary contributions to the program to pay for contract and agency helicopter flying.

Coyotes remain the most problematic predator species in Utah, both in terms of population size and in the amount of livestock they kill. Calves are vulnerable to coyote predation for a short period just after birth, and the majority of the calf protection is concentrated in the early spring calving season. In the absence of predator management, calf losses would be expected to exceed 5%, however, with predation management in place, losses are kept to well below 1%.

Sheep and lambs remain vulnerable to predation throughout the year, and the WS Program works with sheep producers to provide protection on spring lambing range, summer mountain range, and on winter range in the desert. In the absence of protective efforts, it is estimated that lamb losses could be as high as 30%, but the WS program in Utah keeps predation losses to less than 5% on a statewide basis.

Cougars and bears are also a significant predator of sheep and cattle, especially in the summer when sheep and cattle are grazed in the mountains. Of the predation on lambs reported to WS, about 40% are by these two predators. Predation management for cougar and bear is implemented on a corrective basis and does not begin until kills are discovered and confirmed by WS. In order to limit losses caused by cougars or bears, the WS program must be prepared to respond quickly when killing occurs.

A significant amount of predation management is necessary to improve wildlife populations, and the WS program works with the Utah Division of Wildlife Resources (UDWR) and the U.S. Fish and Wildlife Services (USFWS) to provide protection from predators where wildlife populations are below objective. To accomplish this, the program utilizes a combination of 41 full time and seasonal staff, four agency fixed-wing aircraft, two agency helicopters, and nine helicopter contractors. In 2016 the program worked in 30 deer units and subunits, 11 sage grouse management areas, six bighorn sheep units, five pronghorn areas, and eight waterfowl nesting areas, specifically for the protection of native wildlife resources. WS also provided protection for endangered black-footed ferrets and Utah prairie dogs in transplant areas, and conducted feral swine monitoring and removal in specific locations within Utah.

To assure that the WS program has no negative environmental consequences, Federal Environmental Assessments (EA's) have been completed to assess the impacts of the combined State and Federal program. While the program is very successful at protecting livestock and selected wildlife resources, there are no adverse impacts to predator populations, wetlands and watersheds, or other parts of the environment. Annual monitoring of our program impacts is conducted to assure that the analyses in the EA's are still complete and remain valid.

Personnel from the WS program have participated in wolf training as the State of Utah prepares for dispersing wolves from recovering populations in adjacent states. A significant amount of time and effort is necessary to ensure that programs are in place to deal with wolves as they arrive. Per direction from the Utah Legislature, a wolf management plan has been put in place and the Agriculture and Wildlife Damage Prevention Board has adopted the role prescribed by the plan for the WS program. WS personnel will be primary responders when livestock are killed by wolves, as well as assist in the capture, radio collaring, and monitoring of non-depredating wolves. WS personnel are widely recognized as the experts in dealing with predator-related problems, and our skills are needed to assure professional management of wolves as federally protected wildlife and through the transfer of authority to a State managed species.

The WS program plays a critical role in the early detection and management of wildlife-borne diseases. WS is conducting surveillance for early detection and response to highly pathogenic Avian Influenza. The WS program has assisted the UDWR in the removal and testing of mule deer where the potential transmission of Chronic Wasting Disease is a concern. WS collects samples for plague, tularemia, avian influenza, West Nile virus, raccoon roundworm, and other zoonotic disease monitoring around the State, and responds to mortality events in wild birds to assist in detection of diseases. WS has a full-time wildlife disease biologist position to coordinate rapid response and sampling efforts within WS and other agencies. Because our personnel are located throughout the State and are experts in back-country work from horseback, our help is often solicited in recovery of disease samples and even in human search and rescue missions.

The WS program also deals with other wildlife related damage throughout the State, such as wildlife hazards to commercial aviation. In 2014 WS received the National Migratory Bird Stewardship Award from the U.S. Fish and Wildlife Service primarily for our role in protecting raptors at airports. In 2016, WS staff trapped, banded, and relocated over 900 raptors (birds such as hawks, falcons, and owls) from Utah airports to prevent them from being struck by aircraft and threatening human safety. WS also provides technical assistance and training to the public on problems related to urban wildlife involving skunks, raccoons, birds, and other animals. WS continues to conduct disease monitoring in the urban program and responds to human safety cases involving cougars or bears statewide when assistance is requested by the UDWR.

The public, including farmers and ranchers, place a high intrinsic value on wildlife. In order to maintain healthy populations of wildlife and concurrently sustain productive agriculture, a professional wildlife damage management program is needed. In Utah the cooperative Wildlife Services program fills that need.

Animal Industry

Cody James
Director

Major accomplishments in these areas during the past year are as follows:

Animal Health

During the past year, disease free status was maintained for the following diseases:

- Brucellosis
- Tuberculosis
- Pseudorabies
- Salmonella pullorum
- Mycoplasma gallisepticum

Disease monitoring for heartworm, equine encephalitis (Eastern, Western, and West Nile), equine infectious anemia, rabies, brucellosis, tuberculosis, pseudorabies, Salmonella sp., Mycoplasma sp., BSE (Bovine Spongiform Encephalopathy), CWD (Chronic Wasting Disease), trichomoniasis, avian influenza, etc. has continued during the past year.

This year 13,609 bulls were tested in the trichomoniasis testing program year from October 1, 2015 to May 15, 2016. Testing identified 5 infected bulls (a 0.03% detection rate) - down from the previous year of nine positive cases. Affected counties included Iron, Daggett and Washington. Last year Beaver, Daggett and Washington were affected.

Animal Health veterinarians conduct thousands of inspections yearly to protect both the agriculture industry and human health. This year 13,609 bulls were tested for trichomoniasis with only five positive cases detected. They found 58 incidents of vesicular stomatitis and no cases of avian influenza.

The Division, along with the Utah Department of Health, is en gaged in a follow-up study and educational campaign that began this spring coinciding with the advent of spring calving season for cryptosporidiosis. This serves as a preventive effort to avoid another outbreak by exposure to diseased livestock encountered last year at an animal clinic in Northeast Utah. Utilizing retrospective studies and message mapping to reach the at risk populations, we are working to reach populations in our Northeastern counties.

The Division responded to vesicular stomatitis reports in horses and cattle after the initial case was diagnosed in a horse in May 2015. A total of 58 incidents of the disease occurred from May 2105 through December of 2015. Premises were quarantined and released as the disease ran its course with some minor effects on cattle exports and horse movements. This was an unusually large outbreak of the disease in the western states this year with Colorado experiencing the brunt of the outbreak. The Division has investigated three suspect cases so far in 2016 reported by private practitioners with a foreign animal disease diagnostician sent to submit samples to the National Veterinary Diagnostic Laboratory at the Plum Island Animal Disease Center for diagnosis or rule out. Fortunately all have been negative for vesicular stomatitis this year. After last year's unusually large outbreak the Division has been vigilant in placing quarantines and hold orders until negative results are received. This has required some horses to be withheld from competitions and some cattle movements postponed from the suspect premises as a precaution.

Avian Influenza continued to be a major concern for the poultry industry in the United States this past year. Utah detected more highly pathogenic avian influenza as asymptomatic carrier cases in waterfowl surveillance as well as multiple cases of low pathogenic avian influenza in waterfowl with no clinical signs of the disease. No detections of Highly Pathogenic Avian Influenza (HPAI) have been detected in commercial poultry in Utah during this nationwide outbreak. The Division did increase testing requirements for avian influenza for imported birds into the state. The division also conducted training in biosecurity for game bird producers, community outreach efforts with the County Seat television production crew to make back yard bird owners aware of avian influenza, its symptoms, and who to contact if they suspect a problem with their birds.

Monitoring for avian influenza is continuing in Utah. Serological samples for avian influenza are taken and tested from each egg laying flock of chickens in the State quarterly. A minimum of 60 serological samples are taken at the turkey processing plant per month and monitored for avian influenza. The results of these tests are reported to the state veterinarian. All testing has been negative for AI. Wild waterfowl surveillance also continues across the state.

The Division also continued to administer the National Poultry

Improvement Plan (NPIP) in the State. This is a voluntary testing program wherein a flock may be certified disease free in several important disease categories. Participants in the program enjoy significant benefits when shipping birds, eggs, and products in commerce. It also insures that disease free birds, eggs and poultry products are entering the state.

Division staff and veterinarians continue to monitor livestock imports into the state by reviewing incoming Certificates of Veterinary Inspection (CVI) and issuing livestock entry permits to animals that meet Utah entry requirements. Violations of Utah import regulations were investigated and citations issued. CVIs from other states were monitored, filed, and forwarded to our animal health counterparts in the states of destination. From July 2015 through the end of June 2016, 259,610 animals have received permits to enter Utah, not including poultry, which usually accounts for over four million more animals. This number excludes common pets (dogs and cats, etc.) that do not normally require a permit to enter the state, but do require a Certificate of Veterinary Inspection and current rabies vaccination.

Animal Health has the responsibility of providing veterinary supervision and service to the livestock auction markets in Utah with the continued oversight of the Division's disease control and monitoring plan. This program is administered by the Division of Animal Industry, using private veterinarians on contract with the State with relief provided by our Division field veterinarians when needed. With the closing of Smithfield Livestock Auction earlier this year, five livestock auctions that hold weekly sales were serviced under this program. Division veterinarians continue to serve at several junior livestock shows around the state to verify the health of the livestock prior to being admitted to the show, predominately lambs, sheep, hogs, and steers.

Animal disease traceability efforts have continued throughout the year in accordance with the USDA APHIS VS Animal Disease Traceability Rule. This rule requires individual official identification of most livestock species that moves across state lines. The division's software program, USAHERDS, was installed in November of 2014, and has proven its worth for disease monitoring and traceability efforts. This program allows for better tracking and much quicker searching of animals moving into Utah. Two pilot projects are in the works at a large cow/calf ranch operation and one of our livestock market auctions using ultra high frequency tags, stationary and hand held readers to control inventory, movement, and traceability of cattle.

Livestock Inspection

The Livestock (Brand) Inspection Bureau is designed to deny a market to potential thieves and determine the true owners of livestock. The bureau consists of 15 full-time employees, which include 12 special function officers and two law enforcement officers, and 40 half-time or part-time inspectors. The inspectors verify proper ownership of livestock before they are sold, shipped out of state, or sent to slaughter. The Bureau also has a strong presence at each of the five weekly auctions inspecting all cattle and horses.

During FY 2016, a total of 734,218 individual cattle, horses and elk were inspected. This represents approximately 21,750 inspection certificates issued. The entire team of livestock inspectors helped return 3,725 animals to their rightful owners. In today's economy the number of animals returned amounts to over $3.6 million dollars.

All brands registered in the State of Utah's expired on 12-31-2015. A total of 13,984 of those brands were renewed. Each brand owner receives a plastic wallet sized "proof of ownership" card. The ownership card is intended for use during travel and when selling animals at auctions. A new brand book and CD will be available for purchase. Registered brands can also be found on the Department web site.

The Livestock Bureau is now actively using the Fastbrands Country system for electronic brand inspections, giving inspectors: An ability to stay in constant communication with office information; quick trace back and ability for other brand inspectors to research past inspections; newly registered and transferred brands to be updated and ability to be seen in field. The system allows for automatic fill-in of owner and buyer information and fee charges that are more accurate. Reports will automatically tally. Since going live on August 3rd, 2015 to 12-31-2015, Livestock Inspectors have done 1,955 electronic inspections for 45,932 animals. This is in addition to inspectors still writing paper inspections.

With the quickness and accuracy of the system, along with the ease of sharing information, Utah's brand inspectors will have a more efficient way of performing their tasks.

During the year brand inspectors collected $766,452 in Beef Promotion money. Beef Promotion money helps with any action aimed at advancing the image and desirability of beef and beef products with the express intent of improving the competitive position and stimulating sales of beef and beef products in the marketplace. The program offers; Paid consumer advertising;

retail and food service marketing; food-media communications; veal marketing; new-product development; beef recipe development; and other culinary initiatives.

The brand department started collecting the cattlemen's part of predator control money in 1996. During 2015, livestock inspectors continued to collect predator control money. This money, like the Beef Promotion money, is used for the protection of the states livestock producers. The money is forwarded to the Wildlife Services Program to safeguard adult sheep, lambs, and calves from predation. Sheepmen will continue to have their allotment collected by the wool houses and forwarded to the department.

Continuing the effort to assist and give training to the state's port of entry personnel, a livestock inspector is assigned to work monthly in each port of entry. These inspectors are authorized and equipped to chase down those livestock transporters who ignore the signs requiring all livestock hauling vehicles to stop. This is an effort to help prevent diseased animals from entering the state and stolen animals from leaving the state.

The Livestock Inspection Bureau continued an education and enforcement action push. The education sessions have been and will continue to be held on a request basis and conducted by the local livestock inspector. It is up to the association or group to request the session and set up the meeting.

Meat inspection rule changes now allow direct-to-consumer producers to process poultry at farms or other locations so long as it is done under standard sanitary practices according to USDA regulations.

Inspectors have also used education opportunities during local rodeos, horse shows, and sales; where the livestock inspectors have attended without any enforcement action to be taken. Inspectors should have brochures and contact information with them and are open to answering any questions participants might have.

In July of 2014 the Livestock Inspection Bureau ramped up its surveillance efforts by making our vehicles more recognizable with decals identifying them as Livestock Inspection and UDAF. We also have livestock surveillance signs that we hang in livestock prominent areas with Brand Inspector names and phone numbers for that area. The feedback from the producers has been very positive. They recognize us immediately because the decals readily identify us. They also like the signs posted around their livestock. Our high visibility is also noticed by hikers, campers, or potential livestock thieves.

Another tool to raise awareness is a vehicle observation form. When out doing surveillance our inspectors fill it out and leave a copy on the vehicle. This informs the vehicle owner that their vehicle was observed in the area. There is a reminder to leave gates as they are found, not to litter, be careful with fire, and to watch for livestock when hunting or driving. There is a place at the bottom for phone numbers of our inspectors, the Sheriff's Office, and Utah Fish & Game so they have the resources available to call and report an incident as it happens.

With the increased surveillance efforts, our missing livestock reports have decreased by 66%.

Meat Inspection

The Meat and Poultry Inspection program is considered "equal to" the Federal Meat Inspection program. We currently have two State harvesting plants, eight State harvesting and processing plants, six State processing only plants, with one Talmadge Aiken (T/A) harvesting plant, five T/A harvesting and processing plants and eight T/A processing only plants for a total of 30 official plants. We also have 44 custom exempt plants and 28 Farm Custom Slaughter permittee's (Tri-Pod mobile harvesting rigs) for an overall total of 102 establishments throughout Utah.

Once a year between October 1 through September 31, UDAF/MPIP submit to the Federal State audit branch a comprehensive State assessment that covers nine components in which we need to comply. Component 1: Statutory Authority, Component 2: Inspection, Component 3: Product Sampling, Component 4: Staffing and Training, Component 5: Humane Handing, Component 6: Non-Food Safety Consumer Protection, Component 7: Compliance, Component 8: Civil Rights, and Component 9: Financial Accountability.

We currently test for four major pathogens: Salmonella, E coli 0157: H7, Non 0157:H7 STEC, and Listeria Monocytogens. We also test for biological residue in cattle. Bovine Spongiform Encephalopathy (BSE), or mad cow disease, continues to be an issue in the regulatory environment. Each establishment that harvests and/or handles beef carcasses are required to have a written plan on how they would handle Specified Risk Materials (SRM) from these carcasses. This is just one of many federal rules and regulation that the small and very small establishment owner must comply with to remain in business. The Utah Meat and Poultry Inspection program personnel have assisted these small and very small business owners as much as possible to make sure they understand what is required to remain in compliance.

We presently have 24 dedicated meat inspection staff members who include: one Enforcement Investigation Analysis Officers (EIAO) that perform Food Safety assessments in all State inspected facilities. Two trainers that perform training activities, one custom exempt specialist that performs sanitation inspections in all the custom plants throughout the State of Utah. Three frontline supervisors and two public health veterinarians who perform sanitation and humane handling reviews in all of our harvesting establishments along with performing dispositions on all suspect animals.

Fish Health

The aquaculture/aquatic animal health program has four primary functions: 1) license private aquaculture and fee fishing facilities; 2) grant health approval to in-state private aquaculture facilities and all out-of-state aquaculture facilities; 3) issue entry

permits for aquatic animals entering the state and 4) serve on the Fish Health Policy Board and Utah Water Quality and Health Advisory Panel.

Licensing

The aquaculture program reviewed annual reports and renewed Certificates of Registration (COR) for 14 aquaculture facilities, 95 fee fishing facilities, and 4 fish processing plants. The program also coordinated with the Division of Wildlife Resources (DWR) to assess the addition of new species to several facilities and site suitability of three new fee fishing facilities.

Health Approval

The aquaculture program enforces requirements governing health approval of aquatic animals and their sources. The program is based on conducting health and aquatic invasive species inspections for in-state facilities and evaluating annual testing data from out-of-state facilities. In order to be granted health approval, aquaculture facilities must demonstrate that aquatic animals are free from the following prohibited pathogens: Infectious hematopoietic necrosis virus, Infectious pancreatic necrosis virus, Viral hemorrhagic septicemia virus, Oncorhynchus masou virus, Spring viremia of carp virus, Epizootic hematopoietic necrosis virus, White spot syndrome virus, Yellow head virus, Taura syndrome virus, Infectious hypodermal and hematopoietic necrosis virus, Myxobolus cerebralis (whirling disease), Renibacterium salmoninarum (bacterial kidney disease) and Bothriocephalus (Asian tapeworm).

Only facilities that meet testing standards are granted health approval and allowed to move (stock) aquatic animals into private pond, fee fishing facilities, etc. The program also samples fish for sterility and certifies that private hatcheries meet sterility standards set by the Division of Wildlife Resources. In 2015, the aquaculture program inspected six private aquaculture facilities for prohibited pathogens, aquatic invasive species, and sterility of trout. Health and sterility testing involved lethally sampling over 1,700 fish. No prohibited pathogens were detected during health inspections of in-state aquaculture facilities. Health approval was also granted to four in-state mosquito abatement districts, and the following out-of-state aquaculture facilities: four federal hatcheries, 11 private aquaculture facilities, and 13 State hatcheries.

The Division distributed Avian flu prevention displays to farm stores statewide to help backyard bird owners recognize AI symptoms in their flocks. Access the tips at: http://bit.ly/2ecxYy4

Entry Permits

Entry permits are issued to out-of-state facilities that have health approval and are shipping aquatic animals to facilities that have a COR for the aquatic animal or are otherwise legally able to receive the animals by rule. 189 entry permits were issued for 3,035,800 fish eggs, and 4,366,049 fish that entered the state of Utah in 2015. Imported species included: bluegill, channel catfish, crappie, hybrid striped bass, largemouth bass, saugeye, tiger Muskie, triploid grass carp, walleye, yellow perch, arctic grayling, brook trout, brown trout, Coho salmon, cutthroat trout, golden trout, kokanee salmon, lake trout, rainbow trout, and tiger trout.

Fish Health Policy Board

The Fish Health Policy Board (FHPB) met three times in 2015. Agenda items included: three applications for variances to Aquaculture and Aquatic Animal Health Rule (R58-17); reports from the Division of Wildlife Resources on prohibited pathogen (whirling disease) in wild fish populations and the emergency transfer of wild fish due to hardship conditions. The FHPB also acted to change R58-17. The FHPB adopted language to allow for electronic meetings which should allow the FHPB to respond to emergency situations more easily. The FHPB also adopted changes to R58-17 that clarify the level of fish health sampling required for warm water species, the method of sterility testing for grass carp, and exempted live marine seafood shipments from health testing and entry permit requirements.

Since the FHPB contains representatives from UDAF, the Division of Wildlife Resources, private aquaculture and sportsman's groups, discussions of issues that are not governed by the FHPB are common. Issues discussed included: aquatic invasive species, CORs, pond screens and the Division's stocking policy.

Chemistry Laboratory

Dr. Weston Judd
Director

The Laboratory Services Division operates as a service for various divisions within the Department of Agriculture and Food. The Division's laboratories provide chemical, physical, and microbiological analyses of dairy, meat, and other agricultural and food products. All samples analyzed in the laboratories are collected and forwarded by various field inspection personnel from the Divisions of Plant Industry and Conservation, Regulatory Services, and Animal Industry. Most of these samples are tested for specific ingredients as stated by the associated label guarantee. Some products are also examined for the presence of undesirable materials and contaminants, such as bacterial pathogens, filth, insects, rodent contamination, adulterants, inferior products, and pesticide residues.

"Our purpose is to protect the food supply and ensure wholesome food for the citizens of Utah"

The Dairy Testing Laboratory is responsible for testing Grade-A milk and dairy products, including pre-pasteurized milk (raw for pasteurization) as well as finished dairy products. The laboratory also administers an industry laboratory certification program. Our laboratory is certified by the FDA to perform the following tests: standard plate and coliform counts; microscopic and electronic somatic cell determinations; detection of antibiotic residues; and ensuring proper pasteurization. The laboratory is also certified as the FDA Central Milk Laboratory for the State of Utah. Our microbiologists serve as the State Milk Laboratory Evaluation Officers (LEOs) who have jurisdiction over the certified milk labs within the state. The LEO is responsible for on-site evaluation and training of all certified analysts throughout the state. The laboratory personnel administer a yearly proficiency testing program for all industry analysts. We also test finished products for label compliance (protein, %SNF, water, and fat). Raw milk intended for retail is tested for coliform, bacteria, and somatic cell counts; testing for pathogens is also done when requested. The laboratory works closely with the Division of Regulatory Services inspectors to ensure safe and wholesome dairy products.

The Meat Laboratory analyzes meat and meat product samples obtained during inspections of plant and processing facilities in Utah; samples collected from grocery retail stores are also analyzed. Tests are performed to measure fat, moisture, protein, sulfites, and added non-meat products to ensure label compliance of these products. Antibiotic residues and cross-contamination from other species are also monitored. The lab also tests samples from the Montana Department of Agriculture when requested. Samples (meat, carcass, and surface swabs) from processing facilities are tested for the presence of Salmonella, E. coli 0157:H7, non-O157:H7 STEC, and Listeria on a regular basis.

The Pesticide Residue Laboratory tests for the presence and subsequent levels of herbicide, insecticide, rodenticide, and fungicide residues in plants, fruits, vegetables, soil, water, and milk products. These samples are submitted when inspectors suspect there may be a misuse of the application of the pesticide. Milk samples are tested yearly for pesticide contamination in accordance with FDA regulations.

Commercial Feed (agricultural and pet) samples are tested for moisture, protein, fat, fiber, minerals, toxins, antibiotics, and vitamins in the Feed Laboratory. Seed moisture determinations are also performed for the State Seed Laboratory. The Fertilizer Laboratory tests solid and liquid fertilizer samples for nitrogen, phosphorus, potassium, and trace element content, and heavy metals. All feed and fertilizer results are compared to label guarantees to ensure compliance with state labeling laws.

Special Consumer Complaint samples are also examined for the presence of undesirable materials such as filth, insects, rodent contamination, and adulterations. The samples are checked to verify validity of complaint, and if found positive, the matter is turned over to departmental compliance officers for follow-up action.

Significant Events:

The Dairy Testing Laboratory successfully completed the required annual FDA split sample proficiency testing evaluation, and all UDAF Dairy Testing Lab analysts are fully accredited for another year.

One of the laboratory's chemists retired after 31 years of service in the Feed and Fertilizer lab. The Division filled the vacant position in October.

The new Unified State Lab (Module 2) in Taylorsville is expected to be completed by the end of 2016. The new laboratory building will house the UDAF Division of Laboratory Services, as well as the Department of Public Safety Crime Lab, and the Department of Health Medical Examiner facilities. The UDAF Division of Laboratory Services expects to occupy the new facility by early to mid-December 2016.

The following is a breakdown of the number of samples and analyses performed in the various programs by the Laboratory Services Division for fiscal years 2014, 2015, and 2016.

FY	2014 Number of samples	2014 Number of tests	2015 Number of samples	2015 Number of tests	2016 Number of samples	2016 Number of tests
Retail Meat	542	1634	448	1,266	229	530
Grade A Dairy Products	2,843	8,308	2,776	7,970	2,944	7,828
Raw Milk (Pathogens)	8	20	45	75	16	26
Fertilizer	331	1,007	234	738	212	705
Feed	401	1,197	328	1,209	385	1,265
Pesticide Formulation & Residue	4	4	16	29	12	23
Special Samples	18	22	19	76	29	40
Ground Water	0	0	0	0	24	32
Milk Pesticide Residue	348	4,416	90	1,140	160	2,040
Federal Meat/Pathogens	167	167	219	219	171	171
TOTAL	4,653	16,775	4,175	12,722	4,182	12,660

The ground water testing program was discontinued several years ago; egg plant water is included in this category for FY 2016. Routine sampling and testing of raw milk was discontinued in 2013. The higher number of raw milk pathogen samples and associated tests reported for FY 2015 relative to that for FY 2014 and 2016 is primarily due to sampling and testing associated with a *Campylobacter* outbreak investigation conducted in FY 2015.

The UDAF Division of Laboratory Services will occupy a portion of the new Unified State Lab in Taylorsville. The new laboratory building will also house the Department of Public Safety Crime Lab, and the Department of Health Medical Examiner facilities.

Marketing & Economic Development

Wayne Bradshaw
Director

The Marketing and Economic Development Division is charged with promoting "the healthy growth of Utah agriculture." The Division does this through the Utah's Own program, participating in the Western United States Agricultural Trade Association (WUSATA), Jr. Livestock Association, Market News Reporting, and the Specialty Crop Grant Program. The marketing staff includes Wayne Bradshaw, Robin Cahoon, Ryan Parkinson, Laurie Seron, and Mike Smoot.

Utah's Own

Utah's Own promotes local agriculture and food through a branding and marketing program. Companies growing or producing food locally join the program free of cost to utilize the Utah's Own™ trademark to help consumers readily identify local products. This year the Utah's Own staff created a broad advertising campaign to increase consumer awareness of local products and the Utah's Own™ brand. Utilizing billboards, UTA placement, KSL.com, Facebook, and Google ads, the campaign created over 11.5 million impressions. This resulted in big wins for the program by increasing web traffic to utahsown.org by 122%. The program also saw a 346% increase in Instragram followers and a 71% growth in Facebook likes.

The program also produced and launched a new commercial. In one month the commercial has been viewed just over 23,000 times. See the video at: *http://bit.ly/2dw6w2o*

WUSATA

The Western United States Agricultural Trade Association, commonly referred to as WUSATA, is a non-profit organization formed in 1980 by the 13 western state departments of agriculture. In 2016 the 13 western states hosted or will host 41 activities all across the world; to date participating companies have sold $56 million in products.

Market News Reporting

Market news collects and reports commodity price information critical for agriculture producers and agribusinesses. To provide this important service and insure the integrity of sales information, the Division monitors livestock auctions in Cedar City, Salina, Willard, and Monroe on a weekly basis. The market news reporter also compiles current hay sales information from alfalfa hay buyers and sellers weekly. The information is disseminated through the Department's website, print media, radio broadcast, and call-in service.

Jr. Livestock Show

The Division administers the legislative mandated and funded program that assists the State's junior livestock shows. Funds are allocated by an agreed upon formula that promotes youth involvement and offers a quality educational experience.

Specialty Crop Grant

The purpose of the Specialty Crop Block Grant Program (SCBGP) is to solely enhance the competitiveness of specialty crops. Specialty crops are defined as "fruits, vegetables, tree nuts, dried fruits, horticulture, and nursery crops (including floriculture). In 2016 the Marketing Division took on the responsibility of recruiting and oversight of the SCBGP in the State of Utah. During the 2016 year almost $275,000 was distributed for research, development, and project expansion.

Utah's Own launched a broad advertising campaign to build increased awareness of the many benefits of the program Well placed billboards and beautifully produced commercials conveyed a positive message about Utah's family farms and fresh locally grown foods. See the video: http://bit.ly/2dw6w2o

Plant Industry & Conservation

Robert Hougaard
Director

The Division of Plant Industry and Conservation is responsible for ensuring disease free and pest free plants, grains, and seeds, as well as properly labeled agricultural commodities, and the safe application of pesticides and farm chemicals.

Invasive Species Mitigation (ISM)

The role of the Division is to allocate invasive species mitigation funding to projects which have management strategies with a high degree of success in the State of Utah.

Process for approving grants: Applications are submitted to the director of the Division of Plant Industry and Conservation. The Grant Ranking Committee meets to rank projects based on project ranking criteria. The Commissioner of Agriculture and Food, with input from the Utah Conservation Commission and the Department of Natural Resources approves projects to be funded.

Invasive Species Mitigation Funding

Utah statute requires the following ranking criteria be considered;

- Effectiveness in preventing encroachment of an invasive species
- Damage to a local economy
- Damage to wildlife or livestock habitat

Specific Ranking Criteria

- Projects which target eradication in the first three years
- Cooperative weed management areas with multiple stakeholder success
- Ability to show project successes on similar projects
- Local involvement of private land owners
- Projects with matching funds

Number of ISM Applications	80
Number of ISM Projects Funded	66
Number of Invasive Species Treated	18
Number of Counties with Projects	24
Total Treated Acres	27,300

Noxious Weed Control

The state weed specialist administers the Utah Noxious Weed Control Act (Title 4, Chapter 17) and coordinates and monitors weed control programs throughout the state. The twelve compliance specialists located throughout the state make hundreds of visits and inspections each year. This includes visits and or direct contact with the agencies listed below:

- Retail and wholesale Establishments
- Nursery outlets and sod farms
- Weed Supervisors and other County Officials
- State Agencies
- Federal Agencies
- Utility Companies
- Private Landowners
- Hay and Straw Certification
- Cooperative Weed Management Areas (CWMA's)

Cooperative Weed Management

During the past several years, the UDAF has been working diligently with local land management agencies and counties to encourage the development of Cooperative Weed Management Areas (CWMA's). Weed management areas are designed to bring people together to form partnerships to control noxious or invasive weed species. CWMA's break down traditional barriers that have existed for years among agencies. The county weed departments and the local managers of state and federal lands, along with private land owners are now able to cooperate and collaborate on similar noxious weed issues. They share resources and help with weed control problems on lands that they do not administer. There are 25 organized cooperative weed management areas in Utah.

Control of Noxious Weeds

- The division weed specialist coordinates weed control activities among the county weed organizations and the compliance specialists
- Surveys of serious weed infestations are conducted and control programs are developed through the county weed supervisors, county weed boards, and various landowner agencies
- The weed specialist and others continually work with extension and research personnel in encouraging the use of the most effective methods to control the more serious weeds
- Issue Noxious Weed Free Hay Certificates

Activities in Hay and Straw Certification

Certification of hay and straw to be free from noxious weeds has become an important part of allowing these materials to be fed or utilized on public lands throughout Utah and other western states. Weed free certification is now required for all hay and straw used on public land. Plant Industry Compliance Specialists performed the following activities in connection with this program:

Inspections in counties	14
Inspections for producers:	85
Number of Inspections:	128

UTAH GRAZING IMPROVEMENT PROGRAM

UGIP is a broad based program focused on rangeland resource health. Our mission is to "improve productivity and sustainability of rangelands and watersheds for the benefit of all."

Goals:

- Strengthen Utah's Livestock Industry
- Improve Rural Economy
- Enhance the Environment

Additionally, a staff of range specialists located in six regions throughout the state offer the livestock industry information and assistance regarding grazing issues. The program supports grassroots opportunities for livestock producers to provide program direction through six Regional Grazing Advisory Boards and a State Grazing Advisory Board.

Many UGIP projects focus on improving grazing management by increasing water availability. One recent project used solar energy collectors to power a water distribution system which helped double the carrying capacity of one grazing area.

The main focus of the program is to invest in and help facilitate improved resource management. Grants are provided for projects to enhance grazing management and rangeland resource health. Projects are planned and implemented at the regional level, where the advisory boards are involved in project prioritization. From 2006 to August 2016, more than $12.555 million in UGIP funds have been obligated to 635 projects. More than $16 million have been invested in the program from matching funds from producers, NRCS (Natural Resource Conservation Service), BLM (Bureau of Land Management), USFS (U.S. Forest Service), SITLA (State Institutional and Trust Lands Administration), DWR (Division of Wildlife Resources), and other resources. Most projects focus on improving grazing management by increasing water availability and building fences to enhance livestock control. The program has improved more than 3.25 million acres.

Projects funded by UGIP are monitored in several ways. Grantees may gather their own data by taking photos of the affected area before and after project completion, and keeping grazing records. UDAF biologists visit projects to gather more in-depth data, including vegetation species composition and cover. Some projects are also monitored using low-level aerial photography.

UDAF/UGIP worked with partners on three large-scale projects in Rich, Sevier/Piute and Box Elder Counties totaling over 1.5 million acres.

We believe in investing human and financial resources to create financial, social, and ecological wealth for the public and private rangelands of Utah elevating the lives of every citizen of the state.

Utah Conservation Commission

The UCC is authorized under the Utah Code. The Act's purpose as declared in code is: "The Legislature finds and declares that the soil and water resources of this state constitute one of its basic assets and that the preservation of these resources requires planning and programs to ensure the development and utilization of these resources and to protect them from the adverse effects of wind and water erosion, sediment, and sediment related pollutants." With this in mind, the Utah Legislature in 1937 created this unique state government entity, and it has been active since, evolving to meet new environmental and social conditions.

Today the commission consults with stakeholders as it strives to protect the natural resources within the state and administers the conservation district programs. The mission of the Conservation Districts is to enable Utah's private land managers to protect and enhance their soil, water and related natural resources. This is done in cooperation with the UCC and Utah's 38 CD's. Conservation districts are authorized by state law. Together, they work with many other state and federal natural resource-oriented agencies and special interest organizations to bring about many short and long-term public benefits. Districts are the local leaders that influence conservation on private, state and federal lands. Their efforts towards conservation improvements can be directed at a large scale watershed approach or assisting an individual landowner. It is through the local leadership of the CDs that brings positive change and sustainability of Utah's farm and range lands.

The Department of Agriculture and Food provides staff support for the UCC, which is chaired by the Commissioner of Agriculture and Food. Conservation districts are using county resource assessments as a base for identifying concerns. Coordinated resource management plans are being developed to collaborate with the local citizens, city and county officials, and state and federal technical staff. The planning efforts are improving watershed health and Utah's natural resources. The UCC and CD's have continued to aid the Department in further implementation of the Grazing Improvement Program and the Invasive Species Mitigation Act (War-on-Weeds).

Low Cost Loans

Several low interest loan programs are provided for farmers, ranchers and other agribusinesses. The loans have aided the agriculture community by providing funds when conventional loans are unavailable by:

- Providing project funding to assist operators in conserving resources and improving efficiency of operations
- Assisting beginning farmers to purchase farm and ranch properties
- Aiding financially distressed operators with long term funding

The portfolios are comprised of approximately 506 loans, and the combined assets of the program as of June 30, 2016 totaled

more than $39 million. Loans are funded from revolving funds that grow each year from the earnings of the programs. These programs benefit Utah's economy in numerous ways. Loss history has been minimal.

Agriculture Resource Development Loan (ARDL)

The largest program in the Loans Section with 55 percent of its assets and over 500 loans, ARDL is administered by the Section for the Utah Conservation Commission. Technical service and marketing of the program are provided by local conservation districts and the Utah Association of Conservation Districts as well as other conservation partners, both federal and state. Examples of eligible projects include animal waste management, water usage management (irrigation systems and wells), rangeland improvement, on farm energy projects, wind erosion control and disaster mitigation and cleanup. ARDL Interest rates are fixed at 3.00%, 2.75% or 2.50% based on the amount of the loan. A term of either 7 or 15 years will be determined by the type of collateral taken to secure the loan. A four percent administration fee is added to loan amount and covers marketing and project planning costs.

Borrowers are encouraged to use these loans to help fund projects jointly with federal and state grants. They can also finance stand-alone projects.

The division also works with the State Revolving Fund under the Division of Water Quality to underwrite and book loans to finance projects for eliminating or reducing nonpoint source water pollution on privately owned lands. That program was recently expanded to include grants as well as loans. The loans are now included in the ARDL program with some modifications.

Rural Rehabilitation Loans

The two programs, distinguished by whether they use federal or state monies, comprise the rest of the agriculture loans. They are administered by the Section for the Agricultural Advisory Board. Their various purposes are to:

- Provide assistance to producers with viable businesses who have need of long term financing in order to continue in business and cannot obtain adequate financing from commercial lenders
- Help beginning farmers to obtain farms and ranches. This includes providing financing for the transfer of ownership of family farms and ranches from one generation to another

These are essentially loans of last resort requiring that applicants be declined by conventional commercial lenders. They are often granted in cooperation with other lenders such as the USDA Farm Service Agency. Terms range up to a maximum of ten years with longer amortizations. Interest rates charged are four percent or less. These long term real estate loans have helped numerous Utah agricultural operations to remain in business. The maximum loan size is usually limited to $350,000.

Petroleum Storage Tank Loan

Besides agriculture loans, the Loans Section has been working with DEQ's Division of Environmental Response and Remediation since 1996 to underwrite loans to property owners, mostly fuel retailers, who have underground storage tanks that require removal, replacement or other necessary procedures. The program has recently been expanded and the maximum loan size has been increased from $45,000 to $150,000. Loans are limited to a maximum of ten years with zero percent interest.

Agriculture Certificate of Environmental Stewardship

Utah law requires the Conservation Commission to develop the Agriculture Certificate of Environmental Stewardship (ACES), applicable to each agricultural sector. It helps agricultural producers of all sizes evaluate their entire operation and make management decisions that sustain agricultural viability, protect natural resources, support environmentally responsible agricultural production practices, and promote positive public opinion. To be eligible, producers must complete three comprehensive steps:

1. Document completion of education modules
2. Complete a detailed application to evaluate on-farm risk, and
3. Participate in an on-farm inspection to verify program requirements applicable to state and federal environmental regulations.

The certification will be for a five-year term, with renewal for an additional five years upon inspection.

Agricultural Sectors: Identified agricultural sectors include the farmstead, animal feeding operations, grazing lands, and cropping systems.

Protects Natural Resources: The ACES process ensures all participating agricultural producers are making decisions that balance production and environmental demands, measures aimed at protecting soil, water, air, plants, animals, and other environmental factors mean ACES producers are committed to farming and ranching practices that protect Utah's natural resources.

The production of food and fiber is essential to a healthy population. ACES's is based on scientific standards that allow farmers to address environmental concerns while remaining economically viable.

Agriculture plays a vital role in Utah communities, and ACES strengthens the relationships between farmers and their neighbors. Producers who closely examine their operation's potential impact on soil, water, air, plants and animals understand the impact these practices can have on their neighbors. ACES's is a collaborative effort of Utah producers, Department of Agriculture and Food, Utah Conservation Commission, Farm Bureau, local Conservation Districts, Department of Environmental Quality, commodity organizations, universities, and other state and federal agencies.

Benefits of ACES

The ACES will offer alternatives to regulatory permits, provide an extra level of protection against frivolous complaints, and help producers market their commodities.

Expectations of ACES

- Enable producers to evaluate their agricultural practices and make necessary adjustments
- Recognize significant conservation goals that have already been achieved
- Adopt land use practices that maintain or improve agricultural land, while sustaining natural resources
- Create new opportunities to use conservation for income

Entomological Activities

The Utah Department of Agriculture and Food (UDAF), Entomology Program provides leadership to: Nursery, Insect, Phytosanitary, and Apiary Programs, with customers in diverse markets including: horticulture, pest management, field crops, apiarists, government, academic, agriculture, public, conservation, forestry, natural resources and medical. The full-service approach combines broad-based project management capabilities and extensive value added services like insect and plant disease recognition, public outreach /education, current knowledge of national issues affecting stakeholders that produce effective regulatory programs that result in protecting and conserving Utah's lands and natural resources.

Increased production costs, loss of markets, increased pesticide use, and ecological damage are effects often caused by newly introduced invasive and native harmful insect species. Monitoring projects utilize traps and visual surveys to determine the presence of a wide variety of economic insect species. Invasive insects are most often associated with the global movement of plant material. In addition to the nursery plant trade, the hardwood or softwood packing material commonly used to transport tile, stone, glass, and machinery parts from Asia is the most active pathway.

During 2015, there were approximately 1,400 state and federal Phytosanitary Certificates issued under the direction of the State Entomology Program. These certificates allow Utah commercial agriculture businesses to ship plants and plant products to other states and foreign countries. The State Entomology Program also responded to more than 500 public requests for professional advice and assistance. Such assistance includes insect identification, news releases, control recommendations and participation in various education meetings and workshops.

The State Entomologist administers the Utah Bee Inspection Act (Title 4, Chapter 11), the Insect Infestation Emergency Control Act, the Nursery Act, and various entomological services under authority of Title 4, Chapter 2. Major functions performed during 2015 are summarized below:

Newly Detected Invasive Insect Species

Velvet longhorn beetle: Trichoferus campestris (Faldermann) Longhorn beetles are a widespread group of insects that bore into trees. The immature form of the longhorn beetle bores into the cambium layer of trees and shrubs, which contributes to the decline of the plant. There are many established species of longhorn beetles in Utah, including pine sawyers, twig girdlers, and root borers. Most recently, an invasive species, the Velvet longhorn beetle, was detected in South Salt Lake City (2010,2013), Murray City (2012), Salt Lake City (2013), East Millcreek (2013), Millcreek (2013), Alpine (2013), Pleasant Grove (2013), Orem (2013), West Bountiful (2015). To date 2,428 adult specimens of this exotic wood borer has been collected from 19 sites in three Utah Counties. The sites where this beetle has been detected are orchards, riparian areas, and industrial sites. The State Entomology Program is currently assisting research which will lead to a greater understanding of this pest and will aid in developing tools to help control and mitigate damage to Utah's commercial fruit producers.

Spotted wing Drosophila: Drosophila suzukii (Matsumura) These vinegar flies are most commonly a nuisance to homeowners; they are attracted to rotten and fermenting fruit and are normally not considered a threat to agriculture. Also, Drosophila species are commonly used by researchers studying genetics at academic institutions. The spotted wing Drosophila was detected in California in 2008 and has quickly spread throughout North America. Spotted wing Drosophila are documented pests on soft skinned fruits including cherry, raspberry, blackberry, blueberry, strawberry, plums, nectarines, and recent evidence indicates that they may feed on wine grapes. This pest was detected at the Utah State University Extension: Kaysville Research Farm, in August - September, 2010. Detection of this pest continues in Cache, Box Elder, Davis, Salt Lake and Utah counties.

Rangeland Insects

Grasshoppers and Mormon crickets are native insects that can periodically adversely affect crop and rangeland habitats. Annual visual surveys are deployed to monitor populations of these insects. Priority is given to agricultural areas which are experiencing high populations of these insects. Typically, land owners organize and partner with state and federal agencies to conduct suppression projects. In 2015, approximately 4,100 acres were treated cooperatively in the following counties: Beaver, Box Elder, Duchesne, Iron, Millard and Sevier. These projects targeted several species of grasshoppers, post spray surveys indicate that grasshopper populations were reduced to sub-economic levels.

Honey Bee

Africanized honey bee (AHB) is visually identical to its European relative; however, its aggressive nature has earned this honey bee the reputation of being a public hazard. Early detection, supported with information and education, will be a major defense mechanism against this devastating and alarming insect. Considerable education and public awareness activity has occurred since the AHB was discovered in Southern Utah. Our survey has expanded to include managed colonies and natural migration areas. AHB was first detected in Washington, Iron and Kane Counties in 2008. Two years later these invasive bees were found in San Juan County. In 2015, with the assistance of a county inspector it was confirmed that AHB were present in Grand and Wayne counties.

The Utah Bee Inspection Act provides for inspection of apiaries in order to detect and prevent the spread of infectious bee diseases. Without a thorough inspection program, highly contagious diseases could spread rapidly, resulting in serious losses to the bee industry in Utah, with corresponding losses to fruit and

seed crop producers who are dependent on bees for pollination. During 2015, the state Apiary Program inspected 762 hives. The percentage of American foulbrood (Paenibacillus larvae) detected in these colonies was 0.4%

Quarantined Insects

Exotic orchard pests and their respective host plants, and are subject to quarantines of other states. The UDAF helps Utah's fruit growers meet export requirements by administering: a survey program, compliance agreements, and sampling. This program has successfully provided Utah's fruit industry access to out of state markets for their commodities. Since the apple maggot and cherry fruit fly were detected in 1985; UDAF assists property owners by advising orchard spray management techniques and recommending the removal of uncared for and abandoned orchards.

Gypsy moth is a notorious pest of hard wood trees. The major benefits of this program are: cost effectiveness, public nuisance reduction, forest and natural resource protection. Gypsy moth was first found in Salt Lake City in the summer of 1988. Since that time, UDAF has been the lead agency in the administration of a successful eradication program. Eradication efforts have been successful and trapping programs will remain vigorous.

Japanese beetle (JB) is a pest of more than 300 different types of plants. In addition to being a public nuisance its presence would cause loss of markets and increased production costs for Utah's horticultural and fruit growing industries. In 2006, a small population of JB was detected in Orem City. Since then UDAF has successfully implemented an eradication program. The decrease in the population is due to the treatment activities starting in 2007. As of October, 2015 two beetles have been detected in a residential area in Salt Lake City. Detection trapping and delimiting surveys continue.

European corn borer (ECB) is a damaging insect of corn; Utah has quarantine (R68-10) in place for products that could harbor ECB in order to keep this pest from entering the state. A state trapping program is annually conducted in major corn producing areas for this serious pest.

Red Imported Fire Ant (RIFA) is a public nuisance and a federally quarantined insect. The following activities take place annually: early detection survey, quarantine enforcements, port of entry inspection and public education. The Utah RIFA surveys indicate that Washington County is free from RIFA population.

Exotic Pest Survey

The Cooperative Agricultural Program is funded by the United States Department of Agriculture (USDA) Animal Plant Health Inspection Service (APHIS) to provide a holistic framework for planning, preparedness, response and recovery from invasive pests of regulatory significance. In 2015, UDAF cooperation with Utah State University (USU), is conducting early detection programs for exotic insect and pathogens that would pose a significant threat to Utah's agricultural economies.

Due to the increase of international traffic and the shipment of containerized cargo into the State of Utah, there is a need to monitor for the presence of exotic insects such as wood-boring long-horned beetles and bark beetles. UDAF has selected 20 sites throughout the State where such insects may be introduced or first detected. In the four years this program has been in operation, eight new insect records have been established for the State of Utah.

Asian defoliators pose a significant threat to the economic viability of Utah's forest product and ornamental industries. Economic potential is high risk because these organisms attack hosts or products with significant commercial value (such as timber, pulp, or wood products). The organism directly causes tree mortality or predisposes host to mortality by other organisms. Damage by an organism causes a decrease in value of the host affected; for instance, by lowering its market price, increasing cost of production, maintenance, or mitigation, or reducing value of property where it is located. Organisms may cause loss of markets (domestic or foreign) due to presence and quarantine significant status. In 2015 UDAF has targeted 200 sites with pheromone traps where the possible introduction of these insects would likely occur. No introductions of these insects have been detected in the State of Utah.

The exotic alfalfa and corn pest survey targets five different exotic insects. There is a substantial risk of introduction of several insect pests of regulatory concern, especially along the I-15 corridor where many of these operations are located. The risk is amplified because all of these pests have multiple hosts that are present in Utah. If any of the pests were to become established, it would severely impact the agricultural industries, which yield over $550 million annually. Monitoring for all of these target species is of high importance for the continued success of Utah growers. In 2015, Utah State University monitored 50 farms for exotic alfalfa and corn pests.

The UDAF is actively investigating for the presence of the emerald ash borer (EAB). According to the 2006 GAO report on invasive forest pests the emerald ash borer (EAB) can kill all 16 types of ash trees. As of 2005, the pest had killed an estimated 15 million trees (GAO 2006). Due to increased international traffic and the shipment of containerized cargo into the state of Utah, there is a need to monitor for the presence of exotic insects, including EAB. Exotic forest insects have the potential to kill trees and disrupt native forest ecosystems. Monitoring programs assist in detecting the presence of EAB. In 2015, Utah State University, deployed purple sticky panel traps to 95 sites and funnel traps to 10 sites all baited with Manuca oil throughout the State of Utah. Currently no EAB has been detected in the state of Utah.

Biological Control

Assessing the success of weed biocontrol in Utah, the biological control monitoring program remains a key element in the fight against invasive species. Release sites made in 2015 were monitored by trained cooperators to acquire baseline data and as part of the monitoring program. The biocontrol program enlists the help of many agencies to provide the technical assistance needed to carry out program work. Monitoring of biocontrol allows the Division to determine the effectiveness of specific agents. It also helps to track insectaries that we will use for future collection and redistribution. Several biocontrol agents were used in Utah in 2015. Monitoring programs found that Urophora cardui, the Canada thistle gall fly, is established in Northern Utah. The program was also able to collect and redistribute biocontrol agents on Russian knapweed for the first time. The biological control program continues to grow through cooperation with multiple states, federal, state, county and private entities. Insectaries continue biocontrol programs and established collection sites provide biocontrol agents for continued integrated weed management in Utah.

Nursery Inspection

The Utah Department of Agriculture and Food regulates perennial plants sold within the state. The Nursery inspection program ensures consumer protection by maintaining high standards of plants and decreases the spread of plant pathogens and insects.

The Nursery Program facilitated four compliance agreements and reviewed approximately 1,500 interstate plant shipments for quarantine compliance from 20 states and 5 foreign countries.

Harmful Algae Blooms - The Division has produced a brochure for farmers and ranchers about the potential health impacts for livestock and crops regarding toxic algae blooms.

These shipments included an estimated 1,300,000 individual plants which resulted in 34 inspections, six Hold Orders, and six notice of violations. In 2015, 830 commercial nurseries were registered with Utah Department of Agriculture and Food of which 650 were inspected for compliance to the applicable rules and regulations.

Colorado River Basin Salinity Control

The State of Utah currently receives approximately $2 million yearly from the Colorado River Basin States Salinity Control Forum to reduce salt that enters the Colorado River, which has increased significantly from the initial $350,000 received in 1997. During 2015 the State received funding through the Basin States Program to pipe irrigation canals in Daggett and Uintah counties.

The Salinity Program's irrigation projects are an economic benefit to agriculture in eastern Utah. The new irrigation systems increase watering efficiency, decrease water loss through seepage, and improve crop production and uniformity.

Pesticide

The UDAF administers the Utah Pesticide Control Act, which regulates the registration and use of pesticides in Utah. This Act authorizes pesticide registration requirements and the pesticide applicator certification program. The Department has primacy for pesticide use enforcement under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) in Utah. The Department administers sections of FIFRA under which programs are developed and implemented by cooperative grant agreements with the Environmental Protection Agency (EPA). These programs include the Worker Protection Program, Endangered Species Program, Ground Water/Pesticide Protection Program, Certification Program, and Pesticide Enforcement.

Worker Protection

This program provides general training, worker and handler pesticide safety training, "train the trainer" program, training verification, outreach and communication efforts, reporting and tracking, and performance review actions. UDAF has adopted the national Worker Protection Standards (WPS) Verification Program and distributes WPS Worker and Handler Verification cards to qualified WPS trainers and performs WPS training as necessary.

Endangered Species Pesticide

Utah has an Endangered Species Pesticide Plan that allows the state to provide protection for federally listed species from pesticide exposure while tailoring program requirements to local conditions and the needs of pesticide users. Utah's plan focuses on the use of pesticides as they relate to the protection of threatened and endangered species on private agricultural land and lands owned and managed by state agencies. UDAF is the lead state authority responsible for administering the plan as it relates to the use of pesticides. Through an interagency review committee, special use permits or landowner agreements can be established to allow for the continued use of certain restricted pesticides for those locations that contain threatened and endangered species.

Ground Water/Pesticide Protection

The UDAF has a Ground Water/Pesticide State Management Plan to prevent pesticide contamination of the nation's ground water resources. The Utah Ground Water/Pesticide State Management Plan is a state program that has been developed through cooperative efforts of UDAF with various federal, state, and local resource agencies. The plan includes an assessment of risks posed to the state's ground water by a pesticide and a description of specific actions the state will take to protect ground water resources from potentially harmful effects of pesticides.

Certification

The UDAF has a cooperative agreement with EPA to undertake the following as part of the department's Pesticide Certification program: maintaining state certification programs, state coordination with Utah State University (USU) Extension, state evaluation and participation in training programs, conduct certification activities, maintain records for certified pesticide applicators, and monitor certification program efforts, UDAF works with USU Extension to develop pesticide applicator certification manuals and test questions and administers examinations as part of the licensing requirements of the state.

Pesticide Enforcement

The UDAF enforcement activities include the following: cancellation and suspension of pesticide products, general compliance monitoring, tracking, sample collection and analysis, enforcement response policy, ground water and endangered species pesticide enforcement activities, and FIFRA Section 19 (f) enforcement actions.

Number of Commercial Pesticide Businesses	1,169
Number of Commercial, Non-Commercial and Private Applicators:	6,082
Number of pesticide dealers:	123
Number of pesticide investigations:	350
Number of applicator & dealer record audits	149
Number of documentary pesticide samples collected:	846
Number of physical pesticide samples collected:	31
Number of pesticide violations:	350
Number of pesticide applicator training sessions:	33

Pesticide Product Registration

Number of pesticide manufacturers or registrants:	1,148
Number of pesticide products registered	12,132
Number of product registration requests by Compliance Specialists:	42

Fertilizer

Administration of the Utah Commercial Fertilizer Act (Title 4, Chapter 13) regulates the registration, distribution, sale, use, and storage of fertilizer products. UDAF regulates and licenses fertilizer blenders; monitor the applicators that spray or apply fertilizer, and take samples for analysis.

Major functions performed in this program in 2015:

Number fertilizer manufacturers/registrants	493
Number of products received and registered	4,864
Number of products registered because of investigations	39
Number of fertilizers sampled, collected, and analyzed	223
Number of samples that failed to meet guarantee	49
Violation percentage	21.97
Guarantee analysis corrected	10

Commercial Feed

Administration of the Utah Commercial Feed Act, (Title 4, Chapter 12) involves inspection, registration, and sampling of commercial feed products. Activities performed during this program in 2013 are summarized below:

Number of feed products registered:	13,749
Number of feed samples collected and tested:	428
Number of violations:	54
Number of Custom Formula Feed licenses	47

Organic Food

The organic food program certified over 50,190 acres of production farm and pasture ground. This includes such commodities as wheat, safflower, barley, oats, corn and grass. The newest addition to Utah organics is the dairy industry for the production of organic milk and cheese. With the growth of organic livestock production, there is a need to increase the production of feed grains for cattle. The wheat that is grown in Utah is made into high protein organic flour. There is garden produce sold at farmers markets that is certified organic. There is a need for more organic row crop farmers to fill the slots at local farmers markets with their fresh local products. The demand for organic exceeds the supply and organic products are bringing a premium at the local markets.

Utah was accredited in 2002 as a certifying agent for the United States Department of Agriculture National Organic Program, and continues to provide services to the residents of our great state. The organic program continues to offer educational opportunities for the local producers and processors in order to upgrade and modify system plans to meet the requirements of the regulations. There are also opportunities for consumers to learn about organic foods and the requirements for organic food production.

Organic Participants in Utah

Program	Number Participants
Organic crops	26
Organic livestock	2*
Organic processing	27
Total organic participants	51

*Dual Scope

Seed Inspection and Testing

Administration of the Utah Seed Act (Title 4, Chapter 16) involves the inspection and testing of seeds offered for sale in Utah. The Seed Control Official issues letters of violation on all lots of seed that are in violation of the seed act. The labelers of seed have 15 days to correct the violation. Inspectors make an inspection of the seed lots to determine if the violation has been properly corrected. Seed lots are withheld from sale until the violation is corrected.

Seed analysis work performed in 2015 is summarized below

Number of official samples submitted by Inspectors	371
Number of samples in violation	29
Percent violations	07.81
Number of service samples submitted by industry	1,196
Number of seed samples tested:	1,567

Seed Testing and Seed Law Enforcement

The seed analysts conduct tests on seed samples submitted by agricultural inspectors, seed companies, and other interested parties. Most common tests include percent germination, purity, and presence of noxious weeds; although a number of other tests are performed upon request. Inspectors monitor the seed trade by collecting representative samples for testing and by checking for proper labeling of all seed offered for sale and for the presence of noxious weeds and other undesirable factors.

Grain Inspection

The Federal Grain Inspection Service provides, under authority of Title 4, Chapter 2, Section 2, and under designated authority, grain inspection services. Following is a summary of work performed during the past fiscal year under dedicated credit provisions, with expenses paid by revenue received for grading services: Total number of inspections performed: 13,288.
Note: volume of work is influenced each year by weather conditions, government crop programs and marketing situations.

Regulatory Services

Travis Waller
Director

Protecting the safety and integrity of the food supply is one of the Utah Department of Agriculture and Food's (UDAF) core functions. The UDAF Food Program functions as a regulatory agency and therefore has many tools to protect the consumers and promote agriculture. The Food Program currently has 4,368 registered food facilities. Our Food inspectors completed a total of 5,541 total inspections, which includes 3,690 routine inspections and 1,851 follow-ups, and pre-opening inspections this past year compared to 4,164 total inspections the previous year. In spite of experiencing a significant amount of employee turnover over the past few years, the division has managed to stabilize employee retention during the 2015/2016 Fiscal Year and is now staffed with an exceptional group of dedicated individuals. Our current staff of inspectors is completing a respectable number of inspections, but more importantly, are also doing quality work.

Our inspectors are well-trained Food Safety professionals and licensed Environmental Health Scientists. They use their experience and expertise on inspections to evaluate risks to the food supply during the processing, storage and transportation of food throughout the State of Utah. They are knowledgeable in assessing and evaluating the safety of high-risk food processes and offers industry stakeholders reasonable solutions in complying with state and federal food safety regulations. When Critical or Priority violations are noted, our inspectors complete follow-up inspections of these facilities in a timely manner to confirm corrective actions have been performed. From 2015 – 2016, there were 97 Voluntary destructions and Hold Orders involving 3701 pounds of food for a total of $5205.

Produce Safety

The Food Safety Modernization Act went into effect in 2011. The objective of the new law enables the FDA to better protect public health by strengthening the food safety system. It enables FDA and the Utah Department of Agriculture and Food (UDAF) to focus more on preventing food safety problems rather than relying primarily on reacting to problems after they occur.
The law also provides FDA with new enforcement authorization designed to achieve higher rates of compliance with prevention- and risk-based food safety standards and to better respond to and contain problems when they do occur. The law also gives FDA important new tools to hold imported foods to the same standards as domestic foods and directs FDA to build an integrated national food safety system in partnership with state and local authorities.

Agriculture is by nature a complex industry, and does not lend itself to a "one size fits all" regulatory approach. Likewise, the FDA also recognizes that states themselves would be more affective in working directly with their produce growers in developing and implementing these new food safety standards.

In April of 2016, the UDAF applied for a federal grant to enhance produce safety. In August of 2016 UDAF (along with 43 other states who applied for the cooperative agreement), was awarded a $3.6 Million, five-year grant. Applying for the grant and entering into a cooperative agreement with the FDA will enable the state of Utah to work closely and directly with its producers.

The first three years and $1,978,356 of the grant will be used for outreach, education and certification of Utah produce growers.

Cottage Food and Outdoor Markets

We now have 307 Cottage Food facilities registered with the division and approximately 18 are currently in application and review. Product and Label reviews along with extensive consulting make oversight of this program very challenging. Some of the more simple and easy to review applicants are being streamlined back to the inspectors for quicker processing.

Farmers Market

The Outdoor Markets continue to increase in popularity. We have made an effort to communicate with the Market Coordinators and vendors as we have been holding meetings to discuss Outdoor Market Guidelines and issues found at markets during the previous seasons. We have continued to team up with UDAF Marketing and our Local Health Departments to provide Market Coordinator trainings. We are hoping to educate our Coordinators so that they can play a vital role in food safety at their own markets.

Retail Food Program Standards

UDAF is now going into its 9th year of enrollment in the FDA Voluntary National Retail Food Regulatory Program Standards. We have completed 5 of the 10 prescribed Standards. Implementing these Standards ensures a fair and equitable inspection program that is consistent with other states. Training and standardization is an ongoing process and a work plan has been developed to satisfy completion of Standard 2. We had a lot of progress with Standard 4 in regards to a Quality Program.

Our SUCCESS initiatives this year are based on quality inspections with enhanced focus on the five common risk factors leading to foodborne Illness. This Standard 4 was completed and audited in the fall of 2015. The retail food program was awarded two FDA retail grants totaling $23,000 for 2015 and 2016. The $3,000 will cover the costs of the Retail Food Program manager and an employee to attend the FDA Southwest Regional training in New Mexico, while the other $20,000 will be used towards enhancements made to our electronic inspection system FSMS. In 2016 we will be completing the Standard 9 Risk Analysis Study in order to identify areas of education and improvements in regards to the common Risk Factors. We will use this data to educate facility management on improvements and declines in areas of food safety.

Recalls

We continue to monitor a significant number of Class I food product recalls. Class I recalls involve food products that pose a public health threat and these are a priority for the Division. There were 16 recalls, which we responded to in Utah last year. As our compliance and enforcement officer monitors and tracks the recalls with a spreadsheet, FDA and USDA are the lead agencies who notify us of recalls, which may have adverse public health affects. Each Recall is evaluated as to whether or not the products are in the State by using a group email involving the Recall Coordinators for the industry firms. We also notify the State and Local Health Departments on recalls affecting food service establishments. Faster means of communication has resulted in our ability to communicate and check recalls in a much more timely and effective manner. Most of the recalls have been related to Food Allergen Issues, but there have been quite a few recalls related to food borne illness outbreaks. Utah played a major role in the sampling of cucumbers that were implicated in the large Salmonella Poona outbreak and recall in 2015.

In 2015 UDAF responded to 119 consumer complaints. Many of the complaints were concerning foreign objects in food ranging from metal, glass, insects, burnt dough etc. In one extraordinary incident, a mangled bird was found inside bagged salad greens. We also have concerned customers who are reporting issues they have seen in food establishments or report on illnesses they believe is attributed to food items they have recently consumed. There continues to be an increasing number of complaints with dogs in stores.

Our emergency response team was busy throughout the year responding to boil orders, water shutoffs, fires, power outages and truck wrecks involving food products. We appreciate our staff for working outside their assigned schedules to cover these emergencies.

Meat Compliance

The meat compliance program completed a 365 meat reviews across the state. Meat reviews are conducted at our assigned food establishments in order to verify inspected sources and proper labeling. These retail meat facilities are also audited regarding any hotel, restaurant or institution accounts, which may fall under their retail exemptions. We also have Planned Compliance reviews assigned to each inspector. Many of these facilities have had prior violations, which we follow up on. Restaurants are also reviewed in order to verify safe meat sources. We had another busy year with Meat Compliance investigations involving illegal slaughter, misbranding and sale or distribution of uninspected meat products.

Certificates of Free Sale (CFS)

Certificates of Free Sale are a component of the Food Compliance Program which has become a significant trade and marketing tool for Utah's food manufactures. Certificates of Free Sale serve to verify compliance with Good Manufacturing Practices (GMP). The Division continues to experience marked growth in this service, as more and more Utah companies continue to market and promote their products within the globalized market place.

Manufactured Food Standards

The Manufactured Food Regulatory Program Standards (MFRPS) are a set of standards developed by the FDA, along with selected state program managers, that can be used by the states as a guide for continuous improvement for state food manufacturing programs. The goal of the standards is to leverage resources and share common successes to build systems within state regulatory food programs.

The standards promote development of a high-quality state manufactured food regulatory program and include a process for continuous improvement. Gaps are identified, improvement plans are developed and strategic goals are identified. The areas of focus include regulatory foundation, training, inspection programs, auditing, food defense, enforcement and compliance, stakeholder outreach and laboratory services. The Utah Department of Agriculture and Food continues to implement the Manufactured Food Regulatory Program Standards (MFRPS) as an option under their state food inspection contracts.

The Division of Regulatory Services was awarded a grant to implement the Manufactured Food Regulatory Program Standards within a five-year time frame. Currently the Division is in year four of the grant. We went through a 36 month audit in March 2016 and we are pleased to report that we are in conformance or partial conformance with all program standards. The Division will continue to utilize Grant funds, in partnership with DTS, to further the regulatory program standards by expanding

and enhancing the Food Safety Management System database. Inspectors continue to receive specific FDA-mandated training in Manufactured Food program areas. We now have specialized training in dietary
supplements, acidified foods, food traceback investigations, as well as FD152 (Food Processing and technology) and FD180 (Food GMP, Application and Evidence Development).

Food Inspection Contract Program

Under this program, inspections are performed by UDAF Regulatory Division food inspectors who are credentialed by FDA. Contract inspections not only provide a funding source, but also benefits UDAF with technical training, familiarity with federal requirements and more uniform enforcement of consumer laws through cooperation and coordination with FDA. The contract program benefits the FDA by enlarging coverage of the federal Official Establishment Inventory (OEI) and also helps redirect resources to other priorities. FDA Denver District Office provides inspectional assignments in selected food manufacturers/processors to determine compliance with the Federal Food, Drug and Cosmetic (FD & C) Act, state law, or both; The major inspectional emphasis is placed upon determining significant GMP, unsanitary conditions and practices which may render food injurious to health, particularly those involving the introduction, lack of controls, and/or growth promotion of pathogenic organisms and other conditions which may cause food to become filthy, putrid, decomposed or contaminated with foreign objects which present a reasonable possibility of causing the contamination of food. For year 2016, the UDAF Regulatory Division contracted with FDA to conduct 113 food inspections. The Division will continue in this effort for year 2017, conducting an additional 113 inspections. Additionally, key program leaders from UDAF recently attended a new, multi-state meeting in Denver with the FDA to discuss FSMA FDA contracts.

National Shellfish Sanitation Program (NSSP)

The National Shellfish Sanitation Program (NSSP) is the federal/state cooperative program recognized by the U.S. Food and Drug Administration (FDA) and the Interstate Shellfish Sanitation Conference (ISSC) for the sanitary control of shellfish produced and sold for human consumption. The purpose of the NSSP is to promote and improve the sanitation of shellfish (oysters, clams, mussels and scallops) moving in interstate commerce through federal/state cooperation and uniformity of State shellfish programs. Participants in the NSSP include agencies from shellfish producing and non-producing States, FDA, EPA, NOAA, and the shellfish industry. Utah adopts by reference the NSSP Model Ordinance by rule to ensure safe shellfish consumption in Utah.

Dairy Compliance Program

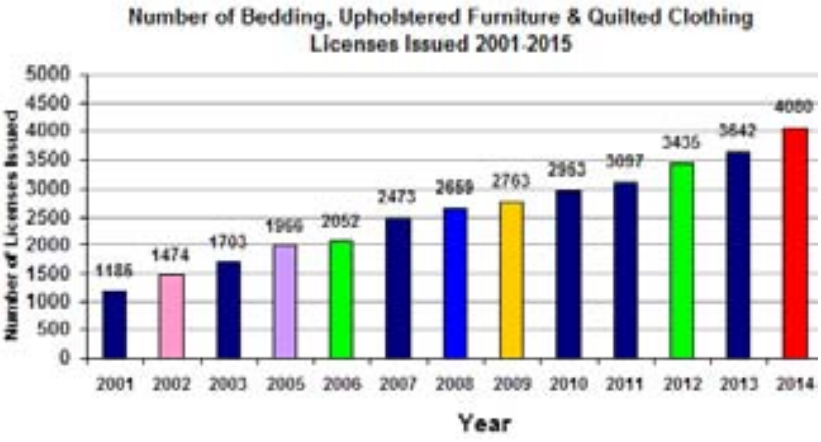
Grade A dairies have dropped in number again during 2015. The rate of loss of Grade A Dairies in Utah has continued at the same rate as 2014. As in the past, the large dairies continue to grow as the small dairies drop out. Cow numbers state wide decreased dramatically during 2015 due to the loss of three large dairy operations where the majority of the cows were sold out of state. Milk production per cow continues to rise, up 157 lbs. from last year. Growth in Raw for Retail operations in the state is still stagnant. A Herd Share Program was passed by the Utah State Legislature in 2015 and is growing slowly. By the end of 2015, only ten operations had registered for the Herd Share Program, most of those being goat operations.

Cow Statistics

Total dairy farms in Utah	185
Total milk cows in Utah	90,000
Average herd size	457
Total milk production	2,222 billion pounds
Average milk production per cow	23,146 pounds
Herd Share Participants	10 registrants

Bedding, Upholstered Furniture & Quilted Clothing

The purpose of the Bedding, Upholstered Furniture, and Quilted Clothing Program is to protect consumers against fraud and product misrepresentation, to assure Utahans hygienically clean products, to provide allergy awareness before purchase of these articles and to help maintain equality in the marketplace for manufacturers. This enables consumers to make informed buying decisions based on price, value and performance. Utah law requires manufacturers, supply dealers, wholesalers, and repairers of these products and their components to obtain an annual license before offering items for sale within the state. Products in retail markets are inspected to ensure compliance and Utah's manufacturing sites are inspected for cleanliness and truthful labeling. Application forms, and other program information as well as helpful links to other regulatory jurisdictions are available at the following URL: http://ag.utah.gov.



In 2015, Utah issued more than 4,600 licenses which generated over $483,000 in revenue. Annual license fees make the program self-sustaining and allow laboratory-testing of suspect products to determine whether their contents are accurately labeled and free from filth and other contaminates. The number of active licenses has nearly quadrupled since 2001. Two full time staff members are currently employed.

Egg & Poultry Grading

The Utah Department of Agriculture & Food administers the Poultry and Egg Grading Program through a State Trust Fund

Agreement with the USDA's Agricultural Marketing Service.

The Egg and Poultry Grading Program provides employees licensed by USDA/AMS and performs grading and certification services throughout the state of Utah. Poultry and eggs can be traded on a uniform basis coast to coast and overseas, by buyers and sellers who use official USDA standards and grades.

Consumers, egg and poultry processors, and large volume buyers who purchase poultry and eggs identified with the USDA grade shield can be assured of the quality of the products they are purchasing.

Program activities include:

- Shell Egg Grading
- Egg Products Inspection
- Shell Egg Surveillance
- Poultry Grading
- School Lunch Commodities

Shell Egg Grading

On January 7, 1931, the Desert News reported that Utah shipped 1,000 train carloads of eggs to New York in the previous year, 1930. With each car carrying 450 to 500 cases. Over time, Utah's egg production and market has changed, but Utah continues to export top quality eggs all over the world. During 2015 thousands of cases of Utah eggs were exported to various foreign countries. Many of these eggs, as well as eggs sold locally, are USDA graded by Utah graders.

During 2015, USDA licensed egg graders graded 2,343,195 cases (30 dozen eggs per case).

Egg Products Inspection

The term "egg products" refers to eggs that have been removed from their shells for processing. Basic egg products include whole eggs, whites, yolks and various blends, with or without non-egg ingredients, that are processed and pasteurized. They may be available in liquid, frozen and dried forms. Nationally approximately 2.5 billion pounds of egg products are produced each year. This represents about 30% of all eggs produced. The Utah egg industry has seen an increase in the demand for these products. This increase in growth can be attributed to the fact that consumers previously went to the grocery store to buy ingredients, now they shop looking for items already prepared. Trends are continuing toward purchasing more and more of our food that has been prepared away from home. The convenience of further processed ingredients in restaurants, cafeterias, food service, and food manufacturing continue to hold promising opportunities for the liquid egg industry.

During the year 2015, 1,228,523 (30 dozen per case) cases of shell eggs were processed into liquid or frozen egg products in Utah.

50,153
weights and
measuring devices
inspected at
4,849
Utah businesses

Shell Egg Surveillance

Most eggs are bought and sold as shell eggs. Shell eggs that are undesirable for human consumption are called restricted eggs. The U.S. Standards for shell eggs limit the number of restricted eggs that are permitted in consumer channels, and there are mandatory procedures for the disposition of restricted eggs. At least four times each year, a State Shell Egg Surveillance Inspector visits each registered packing plant to verify that shell eggs packed for consumer use are in compliance, that restricted eggs are being disposed of properly, and that adequate records are being maintained.

During 2015, State Surveillance Inspectors graded and inspected 352 samples associated with the USDA Surveillance Program.

Poultry Grading

Utah's USDA licensed graders grade whole turkeys and/or parts considering such factors as class, fleshing, finish, freedom from defects, age, weight, and other conditions. The grader applies official standards and regulations to determine the product's grade based upon grading results. Those graded products can be labeled with the USDA shield for distribution all over the world.

The USDA licensed Poultry graders of Utah graded 79,059,570 lbs. of turkey and turkey products in the year 2015.

School Lunch

The depression of the 1930s brought on widespread unemployment. Millions of people in the cities lost their jobs and were without means of support. They were obliged to seek help through public assistance programs. Much of the production of the farmer went begging for a market. Surpluses of farm products continued to mount, prices of farm products declined to a point where farm income provided only a meager subsistence. Millions of school children were unable to pay for their school lunches, and with limited family resources to provide meals at home. The danger of malnutrition among children became a national concern. Federal assistance became essential, and Congressional action was taken in 1935 to aid both agriculture and the school lunch program. Today USDA's, Agricultural Marketing Service, Poultry Program's Commodity Procurement Branch purchases approximately 300 million pounds of poultry and egg products, totaling about $250 million each year. USDA's National School Lunch program serves 31 million children a healthy meal each school day. Utah Egg and Poultry graders inspect these commodities as they arrive in Utah. The process involves breaking the official seals on the semi-trailers, selecting samples of frozen product, and drilling the product in order to obtain the temperature. An organoleptic inspection is done and a USDA certificate is prepared.

The USDA licensed graders of Utah inspected 539,107 lbs. of USDA commodities delivered to various Utah destinations during 2015.

Weights and Measures

The Weights and Measures Program involves all weights and measures of every kind and any instrument or device used in weighing or measuring application. The purpose of the program is to ensure that equity prevails in the market place and that commodities bought or sold are accurately weighed or measured and

properly identified. A goal of the program is to prevent fraud by routinely conducting unannounced inspections. Weights and Measures also respond to consumer complaints.

Weights and Measures inspectors are strategically located throughout the state to ensure equity in the marketplace prevails throughout Utah. There were 4,849 businesses in Utah with 50,153 weighing and measuring devices for the year 2015. There are many more establishments that should be added to the database.

Almost every commodity imaginable is traded in some form of measurement, whether by weight, measure, count, length, etc. To ensure fairness from producer to consumer the Utah Weights and Measures Program is involved in almost every consumer transaction. The program assures consumers that the weight or measure of food and nonfood products, services, or commodities purchased in Utah is correct.

Our inspectors routinely examine many types of scales that are used in commercial applications. Other devices the program inspects include diesel and gasoline pumps, vehicle tank meters, rack meters, high volume petroleum meters and propane meters. Fuel Quality is checked to verify that the consumer is getting the quality that is stated on the pump. Our inspectors also verify the price at the checkout register assuring that price scans correctly and the customer is paying the advertised price. Inspectors check the net quantity statement on packaged goods and verify that the item contains the amount that is stated on the label.

The state of Utah's Metrology Laboratory maintains the legal standards of mass, length, and volume. This lab is operated and maintained by one person. Our Metrologist checks the accuracy of our program field standards. The accuracy of equipment that is used by repair service companies is also verified by the programs Metrologist. These calibration services are provided using standards for mass, length, and volume that are traceable to the National Institute of Standards of and Technology.

Accomplishments

Inspected and tested Weighing and Measuring devices that are used commercially include gasoline pumps, propane meters, high volume gasoline meters, rack meters, vehicle tank meters, scales, etc.. These inspections are unannounced to help both the business and the consumer receive an accurate measurement. These devices are checked to make sure they are operating correctly, legal for trade, and free from fraud and misuse. Utah helps assure that the market place is fair and equitable for both the business and the consumer.

A total of 784 gas stations and 23,960 gasoline pumps and 2,462 fuel storage tanks at Utah's gas stations were inspected during the 2015 calendar year. 37% of all gas stations inspected had something fail the inspection. Increase focus was placed upon gas stations that had not been inspected in 3 years or more. The inspections were related to unit pricing, security seals intact, advertised price, product labeling, storage tanks labeling, water testing, adequately labeled pumps, octane posting, automatic shut off valve, money calibration, hose conditions, fill caps and covers, readable of displays, anti drain valve, computer jump and calibration accuracy.

Weights and Measures Inspectors and the Motor Fuel Specialist, Motor Fuel Quality Lab routinely screened gasoline to verify ethanol presence and octane levels. This included reviewing fuel

Three Utah dairies have incorporated robotic milking machines recently with the number expected to increase. Division dairy inspectors monitor the systems to assure they operate properly and milk quality remains high.

delivery documentation, labeling of the fuel dispensers, and testing fuel storage tanks for water content.

Fuel analysis was performed on fuel samples that were taken for routine inspections and were a response to consumer complaints.

Motor Fuel Lab work/projects completed for 2015 include the following:

- Completed 166 inspections
- Collected 179 samples
- Performed 1,319 analyses
- Responded to nine fuel quality complaints. One was justified and resolved, eight were not reproducible conditions or a matter of educating the public,

Motor Fuel Equipment Maintenance and Calibration includes the following:

- Completed quarterly calibrations on distillation units,
- Completed semi-annual calibration check on vapor pressure analyzer
- Completed annual maintenance and calibration on the flash point analyzer
- Three thermometers recertified
- Two Zeltex units calibrated
- Three analysis procedures for new equipment were drafted.

The Motor Fuel Lab has increased participation in ASTM. The program subscribed to two ASTM Inter-Laboratory Study programs that include #2 Diesel fuel and Motor gasoline.

Our metrology lab continues to maintain recognition from the National Institute of Standards and Technology by meeting all Echelon III parameters. Consumers rely on the services of this facility to certify equipment used for weight and volumetric measurement in commercial business.

Our Metrologist participates in Inter-laboratory comparisons. This verifies the labs accuracy and precision by comparing metrology programs throughout the country. The Metrology Lab successfully completed all requirements. The Metrologist makes sure that the Weights and Measures Program field staff standards are accurate. Repair service personnel also rely on the Metrology Lab for testing the accuracy of equipment used to calibrate

measuring devices.

3,120 artifacts from industry and 203 artifacts from our Weights and Measures Program were tested for a certificate of calibration using standards that are traceable to the National Institute of Standards and Technology.

The Utah Metrology Laboratory is currently recognized under a Regional Measurement Assurance Program provided by the NIST Office of Weights and Measures. During the year we sent our metrologist to the Western Regional Assurance Program yearly training meeting. The State Metrologist received and met all criteria for the Certificate of Measurement Traceability through NIST.

A total of 112 Wheel Load Weigher scale inspections were conducted. These scales are used for law enforcement of weight limits on Utah highways.

Our Weights and Measures program has remained active in the National Conference on Weights and Measures (NCWM). The NCWM is the nation's consensus body that develops model weights and measures regulations adopted by Utah and the rest of the United States. This conference acts as a source of information and a forum for debate in the development of consensus standards for weighing and measuring devices and commodities sold by weight, measure or count, in promoting the use of uniform laws and regulations, and administrative procedures.

1,034 establishments that have small capacity scales (0lb – 1000lbs) received a routine inspection. This included 6,368 small capacity scales.

A total of 322 price verification inspections of retail check-out scanners were conducted. Our inspection program helps the consumer be confident that the price at which a product is advertised or displayed is the price they will be charged at the check-out counter. These inspections include but are not limited to grocery, hardware, general merchandise, drug, automotive supply, convenience, and warehouse club stores.

Inspectors verify the net quantity of contents of packages kept, offered, or exposed for sale, or sold by weight, measure or count. Routine verification of the net contents of packages is important to facilitate value comparison and fair competition. Consumers have the right to expect packages to bear accurate net content information. Those manufacturers whose products are sold in such packages have the right to expect that their competitors will be required to adhere to the same standards. 5,326 packaged items were inspected for net content.

Our Weights and Measures LPG inspector provides inspections to all Utah Vendors dispensing LPG either through dispensers or delivery trucks. 210 propane meters were inspected throughout the state. These inspections included checking appropriate installation and calibration of propane dispensers and meters.

Inspections are conducted on airport fuel trucks, fuel delivery trucks, cement batch plant water meters and other large meters. 244 Vehicle tank meter, 93 rack meter, and 53 water meter inspections were conducted.

Large-scale capacities include 1,000 lbs. and up. These devices may include scales used for weighing livestock, coal, gravel, vehicles, etc., within inspections conducted at auction yards, ranches, ports of entry, mine sites, construction sites, gravel pits and railroad yards, etc. A total of 743 establishments that have large capacity scales were inspected. 1,691 large scales received an inspection. Our heavy capacity scale inspections trucks had continuous breakdowns for extended periods of time.

Consumer Complaints

In addition to routine inspections, Weights and Measures Inspectors investigated approximately 64 consumer complaints in 2015. Complaints were related to Motor Fuel Quality and quantity, scale accuracy, product packaging and labeling requirements, net contents of packaged goods, and getting charged an incorrect price at the retail cash register scanner.[

The registered serviceperson has continued to be an important part of the Weights and Measures Program. During the 2015 calendar year, training continued for the service technician for retail motor fuel devices. Additional service technicians including those from out-of-state have been registering and getting a certificate of registration. These individuals have become of aware of the requirements of the program which includes taking a class, passing a basic knowledge exam, registering a security seal, having calibration equipment with a current certificate from a NIST recognized laboratory, and sending in placed in service reports. Registered Service persons are required to send a placed in service report when placing a weighing and measuring device into service. During the 2015 calendar year 759 placed in service reports were submitted by service persons. This program helps protect the consumer and business owner by improving the security and the accuracy of the gas pump.

Applying uniform weights and measures standards to commercial transactions is important to a strong economy. As population and industry growth continues, so does the need for business and the associated industry. Along with that comes the need to provide weights and measures inspection service to those affected.

Recognition of Career Employees

This past year the Division lost decades of knowledge and experience with the retirement of Doug Pearson and Ed Thomsen. We appreciate Doug and Ed for all of their many years of service within the division of Regulatory Services.

In his 28 years of service, Doug Pearson served in many roles within the division and was a mentor to several current and past employees. Doug was the Meat Compliance Manager for many years, coordinating all Meat Compliance investigations. Doug was also involved in all aspects of the food, dairy and shell egg grading programs as both an inspector and manager.

Ed Thomson worked in all Food Program areas, and he was also an expert in grading butter. He put in a lot of hours over the years in the Cache Valley Butter Plants and rarely took days off from assigned butter grading. He had advance training in the areas of acidified foods and low acid canned foods.

UTAH DEPARTMENT OF AGRICULTURE AND FOOD
ORGANIZATIONAL CHART

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MANUFACTURED FOOD SAFETY
Quincy Boyce

EGG GRADING & POULTRY
Cary Wise

DAIRY
Cody Huft

WEIGHTS & MEASURES
Brett Gurney

BEDDING & UPHOLSTERED FURNITURE
Michelle Jack

GRANTS & RECALLS
Richard Beckstrand

UTAH AGRICULTURE STATISTICS -- 2016

Rank & Quantity Produced, Selected Commodities – Utah, Leading State & United States: 2015

Commodity	Unit	Utah		Leading State		United States
		Rank	Production	State	Production	
Field Crops						
Barley	(1,000 Bu)	14	1,344	North Dakota	67,200	218,187
Corn, Grain	(1,000 Bu)	41	2,595	Iowa	2,505,600	13,601,198
Corn, Silage	(1,000 Tons)	27	966	Wisconsin	18,915	126,894
Hay, All	(1,000 Tons)	24	2,459	Texas	9,720	134,388
Hay, Alfalfa	(1,000 Tons)	13	2,091	California	5,451	58,974
Hay, Other	(1,000 Tons)	37	368	Texas	9,200	75,414
Safflower Production	(1,000 Lbs)	3	14,105	California	123,900	214,251
Wheat, All [1]	(1,000 Bu)	32	6,207	North Dakota	370,023	2,061,939
Wheat, Other Spring	(1,000 Bu)	8	495	North Dakota	319,200	603,240
Wheat, Winter	(1,000 Bu)	31	5,712	Kansas	321,900	1,374,690
Fruits						
Apple Production	(1,000 Lbs)	24	15,000	Washington	5,950,000	10,003,900
Apricot Production	(Tons)	3	7	California	34,500	41,657
Peach Production	(Tons)	16	3,900	California	607,600	847,210
Sweet Cherry Production	(Tons)	8	230	Washington	222,650	338,430
Tart Cherry Production	(Mil Lbs)	2	41	Michigan	158	253
Livestock [2]						
All Cattle & Calves	(1,000 Head)	34	830	Texas	11,700	91,988
All Cows [3]	(1,000 Head)	33	420	Texas	4,750	39,646
Calf Crop	(1,000 Head)	32	390	Texas	4,050	34,302
Beef Cows [3]	(1,000 Head)	28	325	Texas	4,290	30,331
Milk Cows [3]	(1,000 Head)	21	95	California	1,775	9,315
Milk Production	(Mil Lbs)	21	2,222	California	40,898	208,633
All Chickens (Excl Broilers)	(1,000 Head)	22	5,860	Iowa	51,244	470,915
Layers on Hand Dec. 1	(1,000 Head)	22	4,532	Iowa	37,047	346,343
Egg Production [4]	(Mil Eggs)	23	1,252	Iowa	12,463	96,437
All Hogs & Pigs	(1,000 Head)	16	680	Iowa	20,900	68,919
Breeding Hogs & Pigs	(1,000 Head)	16	75	Iowa	1,030	6,002
Pig Crop [4]	(1,000 Head)	16	1,481	Iowa	21,822	120,834
Market Hogs & Pigs	(1,000 Head)	15	605	Iowa	19,870	62,917
Honey Production	(1,000 Lbs)	24	1,134	North Dakota	36,260	156,544
All Sheep & Lambs	(1,000 Head)	5	285	Texas	735	5,320
Breeding Sheep & Lambs	(1,000 Lambs)	3	265	Texas	590	3,965
Lamb Crop	(1,000 Head)	4	230	Texas	350	3,440
Market Sheep & Lambs	(1,000 Head)	14	20	California	255	1,355
Wool Production	(1,000 Lbs)	4	2,390	California	2,850	27,050
Mink Pelt Production	(1,000 Pelts)	2	934	Wisconsin	1,317	3,749
Trout Sold	(1,000 Dollars)	12	630	Idaho	49,362	104,393
Miscellaneous						
Farms	(Number)	37	18,100	Texas	242,000	2,067,000
Land in Farms	(1,000 Acres)	25	11,000	Texas	130,000	912,000
Average Size of Farm	(Acres)	12	608	Wyoming	2,621	441

[1] Excludes Durum wheat for Utah.
[2] Inventory January 1, 2016 for cattle & sheep; December 1, 2015 for hogs & chickens.
[3] Cows & heifers that have calved.
[4] Pig crop & egg production for the marketing year December 1, 2014-November 30, 2015.

Record Highs & Lows: Acreage, Yield & Production of Crops – Utah

Units	Record High		Record Low		Record Began
	(Quantity)	(Year)	(Quantity)	(Year)	(Year)
Corn for Grain					
Harvested ..... (1,000 Acres)	34	2012	2	1963,1966	1882
Yield..... (Bushels/Acre)	178.0	2010	14.7	1889	1882
Production ..(1,000 Bushels)	5,678	2012	85	1934	1882
Corn for Silage					
Harvested ..... (1,000 Acres)	80	1975,1976	2	1920,1921,1922	1919
Yield..... (Tons/Acre)	25.0	2011	6.0	1934	1919
Production ..... (1,000 Tons)	1,501	1980	17	1921	1919
Barley					
Harvested ..... (1,000 Acres)	190	1957	8	1898	1882
Yield..... (Bushels/Acre)	89.0	2010	22.0	1882	1882
Production ..(1,000 Bushels)	12,880	1982	242	1882	1882
Oats					
Harvested ..... (1,000 Acres)	82	1910	2	2015	1882
Yield..... (Bushels/Acre)	85.0	2002, 2015	25.0	1882,1883	1882
Production ..(1,000 Bushels)	3,338	1914	170	2015	1882
All Wheat					
Harvested ..... (1,000 Acres)	444	1953	65	1880,1881	1879
Yield..... (Bushels/Acre)	52.6	1999	15.4	1919	1879
Production ..(1,000 Bushels)	9,750	1986	1,139	1882	1879
Other Spring Wheat					
Harvested ..... (1,000 Acres)	119	1919,1920	7	2007	1919
Yield..... (Bushels/Acre)	65.0	1995	18.7	1919	1919
Production ..(1,000 Bushels)	3,366	1953	390	2002	1919
Winter Wheat					
Harvested ..... (1,000 Acres)	342	1953	100	2002	1909
Yield..... (Bushels/Acre)	52.0	1999	12.7	1919	1909
Production ..(1,000 Bushels)	8,100	1986	1,862	1924	1909
All Hay					
Harvested ..... (1,000 Acres)	760	2011	402	1909	1909
Yield..... (Tons/Acre)	3.93	1999	1.77	1924	1909
Production ..... (1,000 Tons)	2,788	1999	679	1934	1909
Alfalfa Hay					
Harvested ..... (1,000 Acres)	580	2011	359	1934	1919
Yield..... (Tons/Acre)	4.40	1993,1998,1999	1.67	1934	1919
Production ..... (1,000 Tons)	2,420	1999	600	1934	1919
Other Hay					
Harvested ..... (1,000 Acres)	180	2011	75	1934	1919
Yield..... (Tons/Acre)	2.40	2013	0.85	1934	1919
Production ..... (1,000 Tons)	420	2013	64	1934	1919
Apples					
Utilized Prod. ... (Million Lbs)	63	1987	3	1889	1889
Apricots					
Utilized Prod. ..... (Tons)	10,000	1957	0	1972,1975,1999	1929
Peaches (Freestone)					
Utilized Prod. ..... (Tons)	22,100	1922	750	1972	1899
Sweet Cherries					
Utilized Prod. ..... (Tons)	7,700	1968	0	1972	1938
Tart Cherries					
Utilized Prod. ... (Million Lbs)	50	2014	1	1972	1938

Record Highs & Lows: Livestock, Poultry, Honey & Mink – Utah

	Units	Record High		Record Low		Record Began
		(Quantity)	(Year)	(Quantity)	(Year)	(Year)
Cattle & Calves						
Inventory Jan. 1	(1,000 Hd)	950	1983	95	1867	1867
Calf Crop (Annual)	(1,000 Hd)	400	2000, 2001	310	1935,1984	1920
Beef Cows Jan. 1 [1]	(1,000 Hd)	374	1983	107	1939	1920
Milk Cows Jan. 1 [1]	(1,000 Hd)	126	1945	14	1867	1867
Milk Production (Annual)	(Million Lbs)	2,222	2015	412	1924	1924
Cattle on Feed Jan. 1	(1,000 Hd)	81	1966	24	2015	1942
Hogs & Pigs						
Inventory Dec. 1 [2]	(1,000 Hd)	790	2007	4	1866-1868	1866
Sheep & Lambs						
Total Inventory Jan. 1	(1,000 Hd)	2,935	1931	260	2004	1920
Breeding Inventory Jan. 1	(1,000 Hd)	2,775	1931	167	1867	1867
Lamb Crop (Annual)	(1,000 Hd)	1,736	1930	220	2010	1924
Mkt Shp & Lmbs Jan. 1	(1,000 Hd)	70	1995	18	1988	1937
Chickens						
Layers Dec. 1	(1,000 Hd)	4,473	2014	1,166	1935	1925
Egg Production [3]	(Million Eggs)	1,252	2015	142	1924	1924
Honey						
Production (Annual)	(1,000 Lbs)	4,368	1963	780	2010	1913
Mink						
Pelts Produced	(1,000 Pelts)	959	2014	283	1973	1969

[1] Cows & heifers two years old & over prior to 1970; cows that have calved beginning in 1970.
[2] January 1, estimates discontinued in 1969. December 1, estimates beginning in 1969.
[3] Annual egg production estimates cover the period December 1, previous year through November 30.

Number of Farms, Land in Farms, & Average Farm Size – Utah & United States: 2006-2015

[Annual sales of agricultural products of $1,000 or more.]

Year	Utah			United States		
	Number of Farms	Land in Farms	Average Farm Size	Number of Farms	Land in Farms	Average Farm Size
	(Number)	(1,000 Acres)	(Acres)	(Number)	(1,000 Acres)	(Acres)
2006	15,100	11,300	748	2,088,790	925,790	443
2007	16,700	11,100	665	2,204,950	921,460	418
2008	16,800	11,000	655	2,184,500	918,600	421
2009	17,200	11,000	640	2,169,660	917,590	423
2010	17,500	11,000	629	2,149,520	915,660	426
2011	17,900	11,000	615	2,131,240	914,420	429
2012	18,000	11,000	611	2,109,810	914,600	433
2013	18,200	11,000	604	2,102,010	914,030	435
2014	18,100	11,000	608	2,085,000	913,000	438
2015	18,100	11,000	608	2,067,000	912,000	441

Number of Farms by Economic Sales Class – Utah: 2006-2015

Year	$1.000-$9,999	$10,000-$99,999	$100,000-$249,999	$250,000-$499,999	$500,000-999,999 [1]	$1,000,000 & Over [2]	Total
	(Number)	(Number)	(Number)	(Number)	(Number)	(Number)	(Number)
2006	9,400	4,100	760	460	380	(2)	15,100
2007	10,300	4,700	840	410	450	(2)	16,700
2008	10,200	4,800	870	440	490	(2)	16,800
2009	10,500	4,900	850	440	510	(2)	17,200
2010	10,600	5,100	850	420	530	(2)	17,500
2011	10,700	5,200	880	520	600	(2)	17,900
2012	10,650	5,300	930	540	580	(2)	18,000
2013	10,700	5,400	1,000	550	270	280	18,200
2014	10,600	5,500	900	600	220	280	18,100
2015	10,600	5,500	900	600	240	260	18,100

[1] $500,000 & over before 2013 & $500,000 - $999,999 2013 & later.
[2] $1,000,000 & over economic sales class not published before 2013.

Farms: Acres by Economic Sales Class – Utah: 2006-2015

Year	$1,000-$9,999	$10,000-$99,999	$100,000-$249,999	$250,000-$499,999	$500,000-999,999 [1]	$1,000,000 & Over [2]	Total
	(1,000 Acres)	(1,000 Acres)	(1,000 Acres)	(1,000 Acres)	(1,000 Acres)	(1,000 Acres)	(1,000 Acres)
2006	850	2,250	1,500	1,900	4,800	(2)	11,300
2007	850	2,250	1,500	1,200	5,300	(2)	11,100
2008	850	2,300	1,400	1,150	5,300	(2)	11,000
2009	800	2,200	1,400	1,200	5,400	(2)	11,000
2010	800	2,000	1,300	1,300	5,600	(2)	11,000
2011	700	1,900	1,300	1,400	5,700	(2)	11,000
2012	650	1,750	1,300	1,500	5,800	(2)	11,000
2013	650	1,850	1,200	1,400	4,900	1,000	11,000
2014	650	1,900	1,400	1,550	4,500	1,000	11,000
2015	650	1,900	1,400	1,550	4,500	1,000	11,000

[1] $500,000 & over before 2013 & $500,000 - $999,999 2013 & later.
[2] $1,000,000 and over economic sales class not published before 2013.

Farm Income: Cash Receipts by Commodity – Utah: 2010-2015

Utah	2010	2011	2012	2013	2014	2015
	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
All Commodities	1,360,021	1,687,596	1,815,245	1,999,276	2,378,514	1,986,093
Animals & Products	995,546	1,187,391	1,238,130	1,445,925	1,844,476	1,536,523
Meat Animals	459,712	528,555	577,745	768,569	1,033,417	798,671
Cattle & Calves	276,480	320,289	383,545	554,600	795,236	642,075
Hogs	183,232	208,266	194,200	213,969	238,181	156,596
Dairy Products, Milk	310,068	401,408	379,984	413,010	514,527	375,530
Poultry & Eggs	139,522	142,695	148,810	153,498	178,408	273,605
Chicken Eggs	64,329	70,840	72,537	81,139	107,255	199,439
Farm Chickens	4	6	6	7	5	8
Turkeys	75,189	71,849	76,267	72,352	71,148	74,158
Miscellaneous Animals & Products	86,244	114,733	131,591	110,848	118,124	88,717
Aquaculture	601	516	472	617	604	630
Trout	601	516	472	617	604	630
Sheep & Lambs	23,005	N/A	N/A	N/A	N/A	N/A
Honey	1,193	1,570	1,777	2,132	1,730	2,189
Mohair	3	3	3	3	3	3
Other Animals & Products	58,778	108,084	125,339	104,576	111,718	81,832
All Other Animals & Products	18,839	52,564	59,427	56,418	56,398	52,788
Mink Pelts	39,939	55,520	65,912	48,158	55,320	29,044
Wool	2,664	4,560	4,000	3,520	4,068	4,063
Crops	364,476	500,205	577,116	553,351	534,038	449,571
Food Grains	45,998	49,151	58,433	41,996	42,043	30,475
Wheat	45,998	49,151	58,433	41,996	42,043	30,475
Feed Crops	169,046	278,254	319,066	316,697	292,487	232,574
Barley	7,066	10,103	10,091	7,937	6,890	3,670
Corn	14,506	24,264	36,040	33,281	24,387	15,118
Hay	146,895	243,153	272,106	274,575	260,471	213,387
Oats	580	734	828	905	738	398
Oil Crops	2,732	4,308	4,675	3,254	4,218	4,029
Safflower	2,732	4,308	4,675	3,254	4,218	4,029
Vegetables & Melons	5,781	3,271	8,618	8,412	6,634	7,392
Onions	5,781	3,271	8,618	8,412	6,634	7,392
Onions, Storage	5,781	3,271	8,618	8,412	6,634	7,392
Fruits & Nuts	13,473	19,554	31,770	28,080	34,029	22,818
Apples	2,928	4,054	3,635	7,607	4,907	4,896
Apricots	108	219	248	129	330	7
Cherries	7,508	11,137	22,254	14,802	22,711	13,718
Cherries, Sweet	1,433	1,132	1,854	2,041	1,217	193
Cherries, Tart	6,075	10,005	20,400	12,761	21,494	13,525
Peaches	2,929	4,144	5,633	5,542	6,081	4,197
All Other Crops	127,447	145,668	154,554	154,912	154,627	152,283
Mushrooms	2,420	2,666	14,926	14,987	15,146	16,671
Miscellaneous Crops	125,027	143,002	139,628	139,925	139,481	135,612

Data as of August 30, 2016.
N/A = Data are not available/applicable.
Values are rounded to the nearest thousand.
Data source: USDA Economic Research Service. www.ers.usda.gov

Farm Income Indicators – Utah: 2010-2015

Utah	2010	2011	2012	2013	2014	2015
	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Value of Agricultural Sector Production	1,522,823	1,991,136	1,972,123	2,315,114	2,554,225	2,307,955
Value of Crop Production	353,227	531,693	535,120	581,421	508,063	447,163
Crop Cash Receipts	364,476	500,205	577,116	553,351	534,038	449,571
Value of Animals & Products Production	1,007,240	1,198,921	1,201,989	1,466,311	1,792,122	1,629,710
Animals & Products Cash Receipts	995,546	1,187,391	1,238,130	1,445,925	1,844,476	1,536,523
Net Government Transactions	-7,861	-15,161	-14,868	-9,461	9,408	-9,926
Intermediate Product Expenses [1]	881,007	1,075,771	1,052,624	1,170,088	1,348,644	1,154,915
Farm Origin	405,534	561,632	535,660	659,618	791,952	680,800
Feed Purchases	331,940	480,254	444,181	442,644	520,614	445,718
Livestock & Poultry Purchases	41,427	45,885	46,880	159,632	218,528	198,553
Seed Purchases	32,166	35,494	44,599	57,341	52,810	36,529
Manufactured Inputs	173,702	221,780	212,724	213,925	212,096	180,900
Electricity	34,613	44,948	41,825	38,289	36,354	39,821
Fertilizer, Lime, & Soil Conditioners	37,375	51,199	60,702	56,366	55,203	53,764
Pesticides	15,362	15,549	18,708	18,517	21,239	18,708
Fuel & Oils	86,353	110,084	91,489	100,753	99,301	68,607
Other Intermediate Expenses [1]	301,771	292,359	304,240	296,545	344,596	293,216
Machine Hire & Custom Work	31,890	17,594	23,056	21,477	26,305	16,955
Marketing, Storage, & Transportation	40,055	40,298	42,377	31,079	44,477	35,274
Repair & Maintenance [1]	85,301	93,807	89,099	98,032	108,250	96,184
Miscellaneous Expenses [1]	144,524	140,660	149,709	145,957	165,564	144,803
Total Insurance Premiums [4]	25,136	31,160	22,160	27,397	31,571	23,531
Federal Commodity Insurance Premiums	830	1,816	1,345	1,169	1,366	1,495
Irrigation	13,101	13,487	12,356	12,807	14,591	15,652
Contract Labor	9,042	10,904	9,487	12,104	19,459	10,511
Gross Value Added	624,914	889,301	895,144	1,123,461	1,195,531	1,132,603
Capital Consumption [1]	122,505	130,525	225,440	252,795	334,125	267,627
Net Value Added	502,408	758,775	669,704	870,666	861,406	864,975
Factor Payments to Stakeholders [3]	279,945	274,491	305,406	330,236	310,199	281,566
Hired Labor & Non-Cash Employee Compensation	175,386	172,796	193,744	219,316	211,206	177,579
Net Rent Paid to Operator Landlords	310	324	244	398	1,980	2,108
Net Rent Paid to Non-Operator Landlords	23,916	24,995	18,783	30,657	13,046	13,886
Total Interest Expenses [1]	80,333	76,375	92,635	79,866	83,966	87,994
Net Farm Income	222,463	484,285	364,298	540,430	551,208	583,409

Data as of August 30, 2016
Values are rounded to the nearest thousand.
[1] Includes expenses associated with operator dwellings.
[2] Share rent income is included in cash receipts.
[3] Prior to 2008 estimates, factor payments to stakeholders only includes net rent paid to non-operator landlords.
[4] Includes federal & private crop & livestock insurance premiums as well as casualty, hail, motor vehicle & all other insurance premiums.
Data Source: USDA Economic Research Service. www.ers.usda.gov

Agricultural Exports: Estimated Value by Commodity Group – Utah: 2010-2015

Utah	2010	2011	2012	2013	2014	2015
	Million Dollars					
Beef & Veal	22.0	27.9	32.0	50.8	70.2	51.7
Pork	48.9	58.9	55.5	54.4	60.6	41.4
Hides & Skins	15.2	16.8	18.2	26.4	28.3	19.6
Other Livestock Products [1]	40.5	76.9	82.8	63.9	55.1	38.8
Dairy Products	36.5	48.6	52.5	68.9	74.0	55.1
Broiler Meat	…	…	…	…	…	…
Other Poultry Products [2]	21.3	22.8	22.9	25.1	27.4	27.1
Vegetables, Fresh	1.0	0.8	3.0	2.9	2.8	0.9
Vegetables, Processed	1.6	1.2	5.6	5.3	5.4	1.8
Fruits, Fresh	3.2	4.9	7.6	7.0	8.3	5.2
Fruits, Processed	2.9	4.5	6.5	6.2	7.4	5.0
Tree Nuts	…	…	…	…	…	…
Rice	…	…	…	…	…	…
Wheat	28.2	40.6	28.9	31.3	27.1	17.0
Corn	3.0	5.3	4.7	3.5	5.0	2.6
Feeds & Other Feed Grains [3]	19.8	29.2	30.5	41.4	45.8	42.7
Grain Products, Processed	9.7	12.4	13.7	14.8	15.3	13.7
Soybeans	…	…	…	…	…	…
Soybean Meal	…	…	…	…	…	…
Vegetable Oils	0.3	0.5	0.4	0.2	0.3	0.3
Other Oilseeds & Products [4]	1.7	3.0	2.9	2.7	4.7	4.3
Cotton	…	…	…	…	…	…
Tobacco	…	…	…	…	…	…
Other Plant Products [5]	63.5	80.7	85.2	84.5	90.4	92.8
Total Agricultural Exports	319.2	434.7	452.8	489.3	528.3	420.1
Total Animal Products	184.4	251.8	264.0	289.4	315.6	233.8
Total Plant Products	134.9	182.9	188.8	199.9	212.6	186.3

[1] Includes other non-poultry meats, animal fat, live farm animals, and other animal parts.
[2] Includes turkey meat, eggs, and other fowl products.
[3] Includes processed feeds, fodder, barley, oats, rye, and sorghum.
[4] Includes peanuts (oilstock), other oil crops, corn meal, other oilcake and meal, protein substances, bran and residues.
[5] Includes sweeteners and products, other horticulture products, planting seeds, cocoa, coffee, and other processed foods.
Data sources: USDA Economic Research Service; USDA Foreign Agricultural Service (Global Agricultural Trade System)

Utah Crop Summary

2015 Crop Summary

The 2015 corn for grain crop was estimated at 2.60 million bushels, 42 percent below last year's production of 4.48 million bushels, according to the Mountain Regional Field Office of the National Agricultural Statistics Service, USDA. The average yield of 173.0 bushels per acre was 13.0 bushels per acre above the yield achieved last year. Area harvested for grain in 2015, at 15,000 acres, was 13,000 acres below last year. Acreage cut for corn silage was estimated at 42,000 acres, down 3,000 acres from last year, with production estimated at 966,000 tons compared with 990,000 tons produced last year.

Oat seedings in Utah totaled 20,000 acres, unchanged from last year. Producers harvested 2,000 acres for grain or seed, down 1,000 acres from 2014. Oat production totaled 170,000 bushels in 2015, down 18 percent from last year. Oat yield is 85.0 bushels per acre in 2015, up 16.0 bushels per acre from the previous year.

Utah's barley seeded area, at 27,000 acres, is down 5,000 acres from last year. Harvested area, at 16,000 acres, is down 4,000 acres from 2014. Barley yield, at 84.0 bushels per acre, is up 1.0 bushel per acre from last year. Barley production in 2015 is estimated at 1.34 million bushels, down 19 percent from the previous year.

All wheat production in Utah, estimated at 6.21 million bushels, is up 5 percent from 2014. All wheat yield was 48.5 bushels per acre, down 1.8 bushels per acre from a year ago. Winter wheat producers seeded 125,000 acres in the fall of 2014 for harvest in 2015, up from 120,000 acres seeded for the previous year's crop. Acreage harvested for grain increased 10,000 acres from last year to 119,000 acres in 2015. Winter wheat production is estimated at 5.71 million bushels, up 5 percent from last year. Winter wheat yield, at 48.0 bushels per acre, is down 2.0 bushels per acre from last year. Spring wheat seedings, at 10,000 acres, are unchanged from last year. Acreage harvested totaled 9,000 acres, up from 8,000 acres harvested last year. Spring wheat production is estimated at 495,000 bushels, up 15 percent from last year. Spring wheat yield, at 55.0 bushels per acre, is up 1.0 bushel per acre from last year.

All hay production for 2015 is estimated at 2.46 million tons, up 3 percent from the 2014 total. Alfalfa hay production was estimated at 2.09 million tons from 510,000 acres harvested, up 63,000 tons from 2014. Average yield for the 2015 crop was 4.10 tons per acre, 0.20 ton per acre above last year. All other hay production totaled 368,000 tons from 160,000 acres harvested, unchanged from 2014. The average yield of 2.30 tons per acre was unchanged from last year. New seedings of alfalfa and alfalfa mixtures in Utah were estimated at 65,000 acres, up 8 percent from 2014. As of December 1, producers in Utah were storing 1.15 million tons of all hay, down 3 percent from the 1.19 million tons stored last year.

Barley: Area Planted & Harvested, Yield, Production, Price, & Value – Utah: 2006-2015

Year	Area Planted	Area Harvested	Yield per Acre	Production	Price per Bushel [1]	Value of Production
	(1,000 Acres)	(1,000 Acres)	(Bushels)	(1,000 Bushels)	(Dollars)	(1,000 Dollars)
2006	40	30	76.0	2,280	3.02	6,886
2007	38	22	81.0	1,782	3.99	7,110
2008	40	27	84.0	2,268	4.41	10,002
2009	40	30	83.0	2,490	2.56	6,374
2010	39	27	89.0	2,403	3.43	8,242
2011	35	22	81.0	1,782	5.53	9,854
2012	44	26	78.0	2,028	5.87	11,904
2013	40	30	78.0	2,340	4.17	9,758
2014	32	20	83.0	1,660	3.13	5,196
2015	27	16	84.0	1,344	2.97	3,763

[1] Marketing year average price.

Corn for Grain: Area Planted & Harvested, Yield, Production, Price, & Value – Utah: 2006-2015

Year	Area Planted	Area Harvested	Yield per Acre	Production	Price per Bushel [1]	Value of Production
	(1,000 Acres)	(1,000 Acres)	(Bushels)	(1,000 Bushels)	(Dollars)	(1,000 Dollars)
2006	65	17	157.0	2,669	3.29	8,781
2007	70	22	150.0	3,300	4.18	13,794
2008	70	23	157.0	3,611	4.40	15,888
2009	65	17	150.0	2,550	4.52	11,526
2010	70	23	178.0	4,094	5.75	23,541
2011	85	30	164.0	4,920	6.97	34,292
2012	92	34	167.0	5,678	7.59	43,096
2013	83	31	170.0	5,270	5.47	28,827
2014	75	28	160.0	4,480	4.13	18,502
2015	60	15	173.0	2,595	4.70	12,197

[1] Marketing year average price.

Corn for Silage: Area Harvested, Yield, & Production – Utah: 2006-2015

Year	Area Harvested	Yield per Acre	Production
	(1,000 Acres)	(Tons)	(1,000 Tons)
2006	47	22.0	1,034
2007	47	21.0	987
2008	47	23.0	1,081
2009	47	23.0	1,081
2010	46	23.0	1,058
2011	54	25.0	1,350
2012	56	22.0	1,232
2013	49	23.0	1,127
2014	45	22.0	990
2015	42	23.0	966

Alfalfa Hay: Area Harvested, Yield, Production, Price, & Value – Utah: 2006-2015

Year	Area Harvested	Yield	Production	Price per Ton [1]	Value of Production
	(1,000 Acres)	(Tons)	(1,000 Tons)	(Dollars)	(1,000 Dollars)
2006	560	4.00	2,240	101.00	226,240
2007	550	4.10	2,255	131.00	295,405
2008	550	4.20	2,310	170.00	392,700
2009	530	4.20	2,226	102.00	227,052
2010	540	4.00	2,160	106.00	228,960
2011	580	4.10	2,378	185.00	439,930
2012	500	4.10	2,050	190.00	389,500
2013	550	4.20	2,310	182.00	420,420
2014	520	3.90	2,028	188.00	381,264
2015	510	4.10	2,091	162.00	408,240

[1] Marketing year average price.

Other Hay: Area Harvested, Yield, Production, Price, & Value – Utah: 2006-2015

Year	Area Harvested	Yield	Production	Price per Ton [1]	Value of Production
	(1,000 Acres)	(Tons)	(1,000 Tons)	(Dollars)	(1,000 Dollars)
2006	150	2.00	300	77.00	23,100
2007	150	2.20	330	113.00	37,290
2008	145	2.20	319	137.00	43,703
2009	160	2.10	336	94.00	31,584
2010	160	2.20	352	98.00	34,496
2011	180	2.20	396	152.00	60,192
2012	160	2.10	336	152.00	51,072
2013	175	2.40	420	152.00	63,840
2014	160	2.30	368	154.00	56,672
2015	160	2.30	368	131.00	48,944

[1] Marketing year average price.

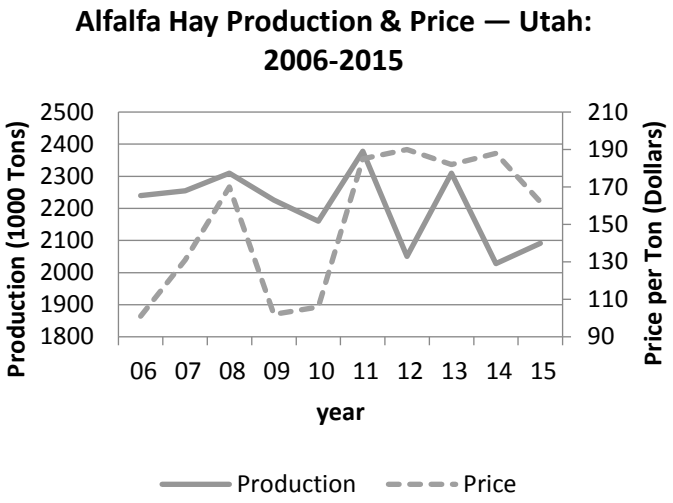
All Hay: Area Harvested, Yield, Production, Price, & Value – Utah: 2006-2015

Year	Area Harvested	Yield	Production	Price per Ton [1]	Value of Production
	(1,000 Acres)	(Tons)	(1,000 Tons)	(Dollars)	(1,000 Dollars)
2006	710	3.58	2,540	99.50	249,340
2007	700	3.69	2,585	129.00	332,695
2008	695	3.78	2,629	167.00	436,403
2009	690	3.71	2,562	102.00	258,636
2010	700	3.59	2,512	106.00	263,456
2011	760	3.65	2,774	185.00	500,122
2012	660	3.62	2,386	189.00	440,572
2013	725	3.77	2,730	182.00	484,260
2014	680	3.52	2,396	188.00	437,936
2015	670	3.67	2,459	162.00	391,868

[1] Marketing year average price.

Hay Stocks: Position & Month – Utah: 2006-2015

Year	On Farms May 1	On Farms December 1
	(1,000 Tons)	(1,000 Tons)
2006	266	1,410
2007	185	1,130
2008	215	1,300
2009	285	1,330
2010	245	1,050
2011	144	1,420
2012	350	900
2013	230	1,250
2014	300	1,190
2015	430	1,150



Oats: Area Planted & Harvested, Yield, Production, Price, & Value – Utah: 2006-2015

Year	Area Planted	Area Harvested	Yield per Acre	Production	Price per Bushel [1]	Value of Production
	(1,000 Acres)	(1,000 Acres)	(Bushels)	(1,000 Bushels)	(Dollars)	(1,000 Dollars)
2006	45	7.0	77.0	539	2.46	1,326
2007	35	4.0	80.0	320	2.65	848
2008	40	3.0	75.0	225	3.20	720
2009	45	4.0	81.0	324	2.50	810
2010	40	4.0	74.0	296	3.60	1,066
2011	33	3.0	81.0	243	4.35	1,057
2012	30	3.0	76.0	228	4.40	1,003
2013	40	5.0	62.0	310	4.42	1,370
2014	20	3.0	69.0	207	3.75	776
2015	20	2.0	85.0	170	3.61	612

[1] Marketing year average price.

Winter Wheat: Area Planted & Harvested, Yield, Production, Price, & Value – Utah: 2006-2015

Year	Area Planted	Area Harvested	Yield per Acre	Production	Price per Bushel [1]	Value of Production
	(1,000 Acres)	(1,000 Acres)	(Bushels)	(1,000 Bushels)	(Dollars)	(1,000 Dollars)
2006	130	125	45.0	5,625	4.85	27,281
2007	135	125	42.0	5,250	8.35	43,838
2008	130	120	41.0	4,920	7.40	36,408
2009	140	135	50.0	6,750	5.70	38,475
2010	135	118	48.0	5,664	7.20	40,781
2011	130	124	50.0	6,200	7.62	47,244
2012	125	109	47.0	5,123	8.97	45,953
2013	120	110	44.0	4,840	7.71	37,316
2014	120	109	50.0	5,450	6.85	37,333
2015	125	119	48.0	5,712	4.77	25,872

[1] Marketing year average price.

Other Spring Wheat: Area Planted & Harvested, Yield, Production, Price, & Value – Utah: 2006-2015

Year	Area Planted	Area Harvested	Yield per acre	Production	Price per Bushel [1]	Value of Production
	(1,000 Acres)	(1,000 Acres)	(Bushels)	(1,000 Bushels)	(Dollars)	(1,000 Dollars)
2006	14	11	45.0	495	4.25	2,104
2007	11	7	58.0	406	7.35	2,984
2008	20	19	44.0	836	11.30	9,447
2009	14	12	44.0	528	8.69	4,588
2010	16	13	55.0	715	9.27	6,628
2011	21	20	46.0	920	10.90	10,028
2012	15	13	40.0	520	11.50	5,980
2013	18	14	46.0	644	8.66	5,577
2014	10	8	54.0	432	8.58	3,707
2015	10	9	55.0	495	7.00	3,960

[1] Marketing year average price.

All Wheat: Area Planted & Harvested, Yield, Production, Price, & Value – Utah: 2006-2015

Year	Area Planted	Area Harvested	Yield per Acre	Production	Price per Bushel [1]	Value of Production
	(1,000 Acres)	(1,000 Acres)	(Bushels)	(1,000 Bushels)	(Dollars)	(1,000 Dollars)
2006	144	136	45.0	6,120	4.85	29,385
2007	146	132	42.8	5,656	8.30	46,822
2008	150	139	41.4	5,756	7.97	45,855
2009	154	147	49.5	7,278	5.92	43,063
2010	151	131	48.7	6,379	7.43	47,409
2011	151	144	49.4	7,120	8.26	57,272
2012	140	122	46.3	5,643	9.59	51,933
2013	138	124	44.2	5,484	7.94	42,893
2014	130	117	50.3	5,882	7.07	41,040
2015	135	128	48.5	6,207	5.18	29,832

[1] Marketing year average price.

Usual Planting & Harvesting Dates by Crop: Utah

Crop	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Corn for Grain		Apr 30-May 20					Oct 10-Oct 30			
Corn for Silage		May 5-May 25					Sep 20-Oct 5			
Grains, Small										
Barley, Spring	Apr 1-Apr 20				Jul 25-Aug 15					
Oats, Spring		Apr 10-May 5				Aug 15-Sep 10				
Wheat, Spring	Apr 1-Apr 20				Aug 5-Aug 25					
Wheat, Winter					Jul 25-Aug 10		Aug 25-Oct 5			
Hay, Alfalfa				Jun 1-Oct 25						
Hay, Other					Jul 10-Aug 25					

Planting Harvest

Barley Stocks: Located Off Farm by Quarter – Utah: 2007-2016 [1]

Year	March 1	June 1	September 1	December 1
	(Bushels)	(Bushels)	(Bushels)	(Bushels)
2007	187,000	98,000	(D)	490,000
2008	327,000	111,000	344,000	238,000
2009	240,000	220,000	459,000	688,000
2010	147,000	122,000	415,000	287,000
2011	117,000	84,000	461,000	344,000
2012	184,000	122,000	276,000	(D)
2013	(D)	100,000	277,000	505,000
2014	(D)	159,000	269,000	396,000
2015	293,000	94,000	400,000	363,000
2016	(D)	97,000	327,000	(2)

Corn Stocks: Located Off Farm by Quarter – Utah: 2007-2016 [1]

Year	March 1	June 1	September 1	December 1
	(Bushels)	(Bushels)	(Bushels)	(Bushels)
2007	1,228,000	1,331,000	(D)	1,212,000
2008	1,294,000	1,419,000	1,068,000	(D)
2009	1,084,000	1,040,000	1,023,000	1,066,000
2010	1,208,000	974,000	599,000	883,000
2011	949,000	956,000	830,000	1,010,000
2012	786,000	(D)	975,000	930,000
2013	566,000	(D)	(D)	861,000
2014	544,000	(D)	(D)	737,000
2015	420,000	(D)	(D)	670,000
2016	(D)	(D)	(D)	(2)

Oat Stocks: Located Off Farm by Quarter – Utah: 2007-2016 [1]

Year	March 1	June 1	September 1	December 1
	(Bushels)	(Bushels)	(Bushels)	(Bushels)
2007	34,000	17,000	46,000	42,000
2008	(D)	(D)	30,000	33,000
2009	18,000	22,000	52,000	39,000
2010	40,000	20,000	48,000	49,000
2011	43,000	23,000	134,000	(D)
2012	67,000	61,000	(D)	49,000
2013	50,000	6,000	(D)	52,000
2014	28,000	(D)	44,000	48,000
2015	37,000	22,000	(D)	(D)
2016	46,000	24,000	(D)	(2)

Wheat Stocks: Located Off Farm by Quarter – Utah: 2007-2016 [1]

Year	March 1	June 1	September 1	December 1
	(Bushels)	(Bushels)	(Bushels)	(Bushels)
2007	5,352,000	4,694,000	6,396,000	6,108,000
2008	4,147,000	3,114,000	4,789,000	3,975,000
2009	4,062,000	3,301,000	2,745,000	4,026,000
2010	4,612,000	2,972,000	5,365,000	5,199,000
2011	4,779,000	1,133,000	4,699,000	4,304,000
2012	4,700,000	3,517,000	4,050,000	4,418,000
2013	4,043,000	3,719,000	4,880,000	4,577,000
2014	4,149,000	3,746,000	5,150,000	4,786,000
2015	4,518,000	4,891,000	6,420,000	5,518,000
2016	5,147,000	4,641,000	5,423,000	(2)

(D) Withheld to avoid disclosing data for individual operations.
[1] Includes stocks at mills, elevators, terminals, & processors.
[2] Estimates available in the December Grain Stocks Release.

Apples: Acreage, Yield, Production, Price & Value – Utah: 2006-2015

Year	Bearing Acreage	Yield per Acre [1]	Production		Price per Pound	Value of Utilized Production
			Total	Utilized		
	(Acres)	(Pounds)	(Million Pounds)	(Million Pounds)	(Dollars)	(1,000 Dollars)
2006	1,300	7,690	10.0	9.9	0.308	3,643
2007	1,400	13,600	19.0	18.0	0.329	5,916
2008	1,400	8,570	12.0	11.6	0.286	3,315
2009	1,400	12,900	18.0	16.0	0.296	4,742
2010	1,400	8,570	12.0	11.7	0.250	2,928
2011	1,400	13,600	19.0	18.3	0.222	4,054
2012	1,400	10,000	14.0	13.8	0.263	3,635
2013	1,300	12,700	16.5	15.8	0.481	7,607
2014	1,300	17,700	23.0	22.4	0.219	4,907
2015	1,200	12,500	15.0	14.9	0.329	4,896

[1] Yield is based on total production, which includes unharvested production & fruit harvested but not sold due to market conditions.

Apricot: Acreage, Yield, Production, Price & Value – Utah: 2007-2015

Year	Bearing Acreage	Yield per Acre [1]	Production		Price per Ton	Value of Utilized Production
			Total	Utilized		
	(Acres)	(Tons)	(Tons)	(Tons)	(Dollars)	(1,000 Dollars)
2007	(D)	(D)	260	260	815.00	212
2008	(D)	(D)	410	380	468.00	178
2009	(D)	(D)	320	290	862.00	250
2010	(D)	(D)	280	250	432.00	108
2011	(D)	(D)	200	170	1,290.00	219
2012	(D)	(D)	300	270	919.00	248
2013	(D)	(D)	135	128	1,010.00	129
2014	120	1.90	228	218	1,510.00	330
2015	120	0.06	7	7	(D)	(D)

(D) Withheld to avoid disclosing data for individual operations.
[1] Yield is based on total production.

Sweet Cherry: Acreage, Yield, Production, Price & Value – Utah: 2007-2015

Year	Bearing Acreage	Yield per Acre [1]	Production		Price per Ton	Value of Utilized Production
			Total	Utilized		
	(Acres)	(Tons)	(Tons)	(Tons)	(Dollars)	(1,000 Dollars)
2007	550	2.27	1,250	1,250	1,380.00	1,722
2008	500	0.10	50	50	2,440.00	122
2009	500	3.08	1,540	1,330	1,680.00	2,231
2010	500	2.20	1,100	1,080	1,330.00	1,433
2011	500	1.60	800	770	1,470.00	1,132
2012	500	2.60	1,300	1,280	1,450.00	1,854
2013	500	1.66	830	820	2,490.00	2,041
2014	400	2.10	840	810	1,500.00	1,217
2015	300	0.77	230	226	854.00	193

[1] Yield is based on total production.

Tart Cherries: Acreage, Yield, Production, Price & Value – Utah: 2007-2015

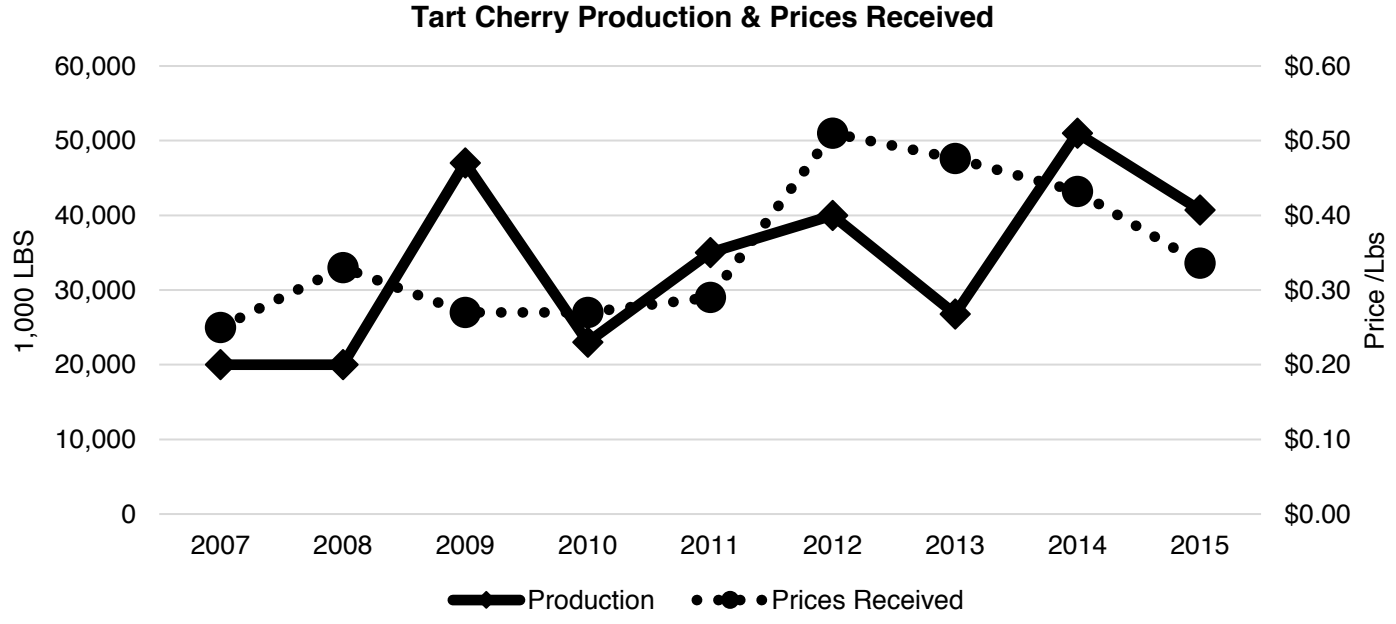
Year	Bearing Acreage	Yield per Acre [1]	Production		Price per Pound	Value of Utilized Production
			Total	Utilized		
	(Acres)	(Pounds)	(Million Pounds)	(Million Pounds)	(Dollars)	(1,000 Dollars)
2007	2,800	7,140	20.0	19.0	0.250	4,750
2008	2,900	6,900	20.0	19.0	0.330	6,270
2009	3,300	14,200	47.0	34.0	0.270	9,180
2010	3,300	6,970	23.0	22.5	0.270	6,075
2011	3,300	10,600	35.0	34.5	0.290	10,005
2012	3,300	12,100	40.0	40.0	0.510	20,400
2013	3,300	8,120	26.8	26.8	0.476	12,761
2014	3,300	15,500	51.0	49.8	0.432	21,494
2015	3,100	13,100	40.7	40.3	0.336	13,525

[1] Yield is based on total production.

Peaches: Acreage, Yield, Production, Price & Value – Utah: 2006-2015

Year	Bearing Acreage	Yield per Acre [1]	Production		Price per Ton	Value of Utilized Production
			Total	Utilized		
	(Acres)	(Tons)	(Tons)	(Tons)	(Dollars)	(1,000 Dollars)
2006	1,400	4.00	5,600	5,400	672.00	3,627
2007	1,500	3.00	4,500	4,400	667.00	2,934
2008	1,500	3.33	5,000	4,500	868.00	3,906
2009	1,500	3.87	5,800	5,500	1,040.00	5,720
2010	1,500	2.87	4,300	4,240	691.00	2,929
2011	1,500	2.87	4,300	4,100	1,010.00	4,144
2012	1,500	3.53	5,300	5,200	1,080.00	5,633
2013	1,300	4.17	5,421	5,141	1,080.00	5,542
2014	1,300	5.00	6,500	6,200	981.00	6,081
2015	1,300	3.00	3,900	3,880	1,080.00	4,197

[1] Yield is based on total production.



Operations: All Cattle & Calves – Utah: 2002, 2007 & 2012 [1]

All Cattle & Calves	2002	2007	2012
	(Number)	(Number)	(Number)
Operations with			
1 - 9 Head	1,741	2,208	3,412
10 - 19 Head	912	1,081	1,348
20 - 49 Head	1,289	1,521	1,604
50 - 99 Head	875	977	864
100 - 199 Head	737	819	600
200 - 499 Head	726	595	490
500 Head or More	408	380	307

Operations with Beef Cows – Utah: 2002, 2007 & 2012 [1]

Beef Cows	2002	2007	2012
	(Number)	(Number)	(Number)
Operations with			
1 - 9 Head	1,521	1,821	2,838
10 - 19 Head	809	863	1,113
20 - 49 Head	1,077	1,172	1,307
50 - 99 Head	721	768	639
100 - 199 Head	508	503	483
200 - 499 Head	322	359	321
500 Head or More	97	103	126

Operations With Milk Cows – Utah: 2002, 2007 & 2012 [1]

Milk Cows	2002	2007	2012
	(Number)	(Number)	(Number)
Operations with			
1 - 9 Head	274	174	256
10 - 19 Head	14	8	15
20 - 49 Head	40	22	31
50 - 99 Head	88	53	30
100 - 199 Head	140	92	54
200 - 499 Head	81	59	45
500 Head or More	43	42	46

Operations With Sheep or Lambs – Utah: 2002, 2007 & 2012 [1]

Sheep and Lambs	2002	2007	2012
	(Number)	(Number)	(Number)
1 - 24 Head	842	1,037	1,196
25 - 99 Head	313	354	372
100 - 299 Head	127	109	79
300 - 999 Head	63	48	29
1,000 Head or More	77	67	79

Operations With Hogs & Pigs – Utah: 2002, 2007 & 2012 [1]

Hogs & Pigs	2002	2007	2012
	(Number)	(Number)	(Number)
All Operations	518	611	669

[1] Livestock operations from U.S. Census of Agriculture published every 5 years. Estimates as of the end of December.

Cattle & Calves: Number by Class & Calf Crop – Utah: January 1, 2012-2016

Class	2012	2013	2014	2015	2016
	(Head)	(Head)	(Head)	(Head)	(Head)
All Cattle & Calves	820,000	790,000	810,000	780,000	830,000
Cows & Heifers, That Have Calved	450,000	460,000	435,000	420,000	420,000
Beef Cows	354,000	365,000	340,000	324,000	325,000
Milk Cows	96,000	95,000	95,000	96,000	95,000
Calves, Under 500 Pounds	100,000	85,000	82,000	70,000	85,000
Steers, 500 Pounds & Over	85,000	70,000	85,000	78,000	90,000
Heifers, 500 Pounds & Over					
Beef Cow Replacements	65,000	60,000	70,000	78,000	90,000
Milk Cow Replacements	53,000	50,000	46,000	48,000	50,000
Other Heifers	47,000	45,000	69,000	64,000	70,000
Bulls, 500 Pounds & Over	20,000	20,000	23,000	22,000	25,000
Cattle on Feed	26,000	26,000	26,000	24,000	27,000
Calf Crop	385,000	380,000	385,000	390,000	(1)
Unit	Value of Inventory [2 3]				
Value per Head (Dollars)	1,180	1,200	1,350	1,750	1,490
Value of Inventory (1,000 Dollars)	967,600	948,000	1,093,500	1,365,000	1,236,700

[1] Data available 2017
[2] Value of all cattle & calves.
[3] 2012 - 2013 revised.

Cattle & Calves: Balance Sheet – Utah: 2011-2015

Inventory Additions & Removals	2011	2012	2013	2014	2015
	(Head)	(Head)	(Head)	(Head)	(Head)
Inventory Beginning of year	820,000	820,000	790,000	810,000	780,000
Calf Crop	375,000	385,000	380,000	385,000	390,000
In-Shipments	50,000	50,000	175,000	191,000	177,000
Marketings [1]					
Cattle	349,000	380,000	446,000	525,000	445,500
Calves	39,000	45,000	51,000	45,000	36,000
Farm Slaughter Cattle & Calves [2]	2,000	2,000	1,000	2,000	1,500
Deaths					
Cattle	11,000	13,000	14,000	14,000	13,000
Calves	24,000	25,000	23,000	20,000	21,000
Inventory End of Year	820,000	790,000	810,000	780,000	830,000

[1] Includes custom slaughter for use on farms where produced & State out-shipments, but excludes inter-farm sales within the State.
[2] Excludes custom slaughter at commercial establishments.

Cattle & Calves: Production, Marketings & Income – Utah: 2011-2015

Unit	2011	2012	2013	2014	2015
Production [1] (1,000 Lbs)	256,590	258,655	313,535	328,000	319,895
Marketings [2] (1,000 Lbs)	298,500	325,100	460,000	533,200	451,500
Value of Production (1,000 Dollars)	272,474	302,585	374,285	482,669	454,749
Value of Sales [3] (1,000 Dollars)	320,289	383,545	554,600	795,236	642,075
Value of Home Consumption (1,000 Dollars)	6,552	8,882	9,121	11,447	9,066
Gross Income (1,000 Dollars)	326,841	392,427	563,721	806,683	651,141

[1] Includes custom slaughter for use on farms where produced & state out-shipments, but excludes inter-farm sales within the state.
[2] Excludes custom slaughter at commercial establishments. Production & marketings are live weight in pounds.
[3] Excludes inter-farm in-state sales.

Dairy: Milk Production & Milkfat – Utah: 2011-2015

	Unit	2011	2012	2013	2014	2015
Number of Milk Cows on Farms [1]	(1,000 Hd)	92,000	96,000	95,000	95,000	96,000
Production of Milk & Milkfat [2]						
Milk per Cow						
Milk	(Pounds)	22,161	22,863	22,432	22,989	23,146
Milkfat	(Pounds)	820	844	843	855	863
Total						
Percentage Milkfat.....	(Percent)	3.70	3.69	3.76	3.72	3.73
Milk	(Million Pounds)	2,061	2,172	2,131	2,184	2,222
Milkfat	(Million Pounds)	76	80	80	81	83
Milk Price	(Dollars/100 Pounds)	19.60	17.60	19.50	23.70	17.00
Value of Production	(1,000 Dollars)	403,956	382,272	415,545	517,608	377,740

[1] Average number of cows on farms during year, excluding heifers not yet freshened.
[2] Milk sold to plants & dealers as whole milk & equivalent amounts of milk for cream. Includes milk produced by dealers' own herds & small amounts sold directly to consumers. Includes milk produced by institutional herds. Excludes milk sucked by calves.

Milk & Cream: Marketings, Used on Farm, Income, & Value – Utah: 2011-2015

	Unit	2011	2012	2013	2014	2015
Combined Marketings of Milk & Cream						
Milk Sold	(Million Pounds)	2,048	2,159	2,118	2,171	2,209
Average Price						
Per 100 Pounds of Milk [1]	(Dollars)	19.60	17.60	19.50	23.70	17.00
Per Pound of Milkfat	(Dollars)	5.30	4.77	5.19	6.37	4.56
Value of Milk Marketings	(1,000 Dollars)	401,408	379,984	413,010	514,527	375,530
Used for Milk, Cream & Butter by Producers						
Milk Utilized	(Million Pounds)	1.00	1.00	1.00	1.00	1.00
Value.....	(Dollars)	196,000	176,000	195,000	237,000	170,000
Milk Used on Farm for Feed....	(Mill Pounds)	12.00	12.00	12.00	12.00	12.00
Gross Producer Income [2]	(1,000 Dollars)	401,604	380,160	413,205	514,764	375,700
Value of Milk Produced [3]	(1,000 Dollars)	403,956	382,272	415,545	517,608	377,740

[1] Average price for marketing year.
[2] Cash receipts from marketings of milk & cream, plus value of milk used for home consumption.
[3] Includes value of milk fed to calves.

Manufactured Dairy Products – Utah: 2011-2015

	Unit	2011	2012	2013	2014	2015
Low Fat Cottage Cheese Prod.[1]	(1,000 Pounds)	4,936	5,395	3,945	5,094	(D)
Sour Cream Production	(1,000 Pounds)	12,626	13,595	12,550	(D)	(D)

[1] Fat content less than 4.0 percent.
(D) Withheld to avoid disclosing data for individual operations.

Milk Cows: Production by Month – Utah: 2013-2015

Year & Month	Milk Cows [1 3]	Milk per Cow [2 3]	Milk Production [2]	Year & Month	Milk Cows [1 3]	Milk per Cow [2 3]	Milk Production [2]
	(1,000 Head)	(Pounds)	(Million Pounds)		(1,000 Head)	(Pounds)	(Million Pounds)
2013							
January	95	1,855	176	August	96	1,990	191
February	95	1,665	158	September	96	1,885	181
March	(3)	(3)	181	October	96	1,925	185
April	(3)	(3)	180	November	96	1,865	179
May	(3)	(3)	187	December	96	1,960	188
June	(3)	(3)	183				
July	95	1,960	186	**Annual Total**	95	22,989	2,184
August	95	1,960	186				
September	95	1,830	174	2015			
October	95	1,865	177	January	96	1,965	189
November	95	1,780	169	February	96	1,770	170
December	95	1,830	174	March	96	1,990	191
				April	96	1,950	187
Annual Total	95	22,432	2,131	May	96	2,030	195
				June	96	1,990	191
2014				July	96	2,010	193
January	95	1,840	175	August	96	1,990	191
February	95	1,685	160	September	96	1,875	180
March	95	1,905	181	October	96	1,900	182
April	95	1,895	180	November	95	1,820	173
May	95	1,990	189	December	95	1,895	180
June	95	1,945	185				
July	95	2,000	190	**Annual Total**	96	23,146	2,222

[1] Includes dry cows; excludes heifers not yet fresh.
[2] Excludes milk sucked by calves.
[3] Survey was not conducted in April & July, resulting in no milk cow & milk per cow data for March through June 2013. 2013 annual totals include modeled data.

Commercial Cattle Slaughter – Utah: Monthly 2014-2015

Month	Number Slaughtered		Total Live Weight		Average Live Weight	
	2014	2015	2014	2015	2014	2015
	(Head)	(Head)	(1,000 Pounds)	(1,000 Pounds)	(Pounds)	(Pounds)
January	49,900	46,500	68,648	62,841	1,377	1,352
February	43,500	41,800	60,292	56,947	1,388	1,364
March	45,600	44,600	62,775	61,097	1,378	1,372
April	47,700	46,500	63,726	62,939	1,339	1,355
May	48,100	42,800	62,048	56,442	1,292	1,319
June	45,700	45,700	59,916	60,873	1,311	1,335
July	49,500	48,000	66,537	64,931	1,346	1,355
August	46,900	45,500	62,899	63,307	1,343	1,394
September	46,100	46,500	62,387	64,722	1,355	1,395
October	50,600	46,500	68,796	64,833	1,360	1,399
November	42,400	42,100	56,965	58,236	1,345	1,387
December	47,700	46,900	63,441	65,906	1,330	1,411
Annual Total [1]	563,700	543,300	758,430	743,073	1,347	1,370

Hogs & Pigs: Total Breeding & Market Inventory, Farrowings, Pigs per Litter, Pig Crop, & Marketings – Utah: December 1, 2006-2015

[Farrowings, Pigs per Litter, Pig Crop & Marketings for the Year, December 1, previous year, through November 30.]

Year	Inventory			Sows Farrowing	Pigs per Litter	Pig Crop	Marketings [1]
	Total	Breeding	Market				
	(1,000 Head)	(1,000 Head)	(1,000 Head)	(1,000 Head)	(Head)	(1,000 Head)	(1,000 Head)
2006	680	103	577	144	9.48	1,365	1,303
2007	790	100	690	160	9.78	1,565	1,348
2008	740	75	665	163	9.90	1,614	1,527
2009	730	75	655	167	9.85	1,645	1,554
2010	740	80	660	164	10.04	1,647	1,549
2011	760	80	680	163	10.17	1,658	1,549
2012	740	80	660	163	10.18	1,660	1,593
2013	700	75	625	167	10.07	1,682	1,617
2014	610	75	535	162	9.44	1,529	1,469
2015	680	75	605	156	9.43	1,481	1,256

[1] Includes custom slaughter for use on farms where produced & state outshipments, but excludes interfarm sales within the state.

Hogs & Pigs: Balance Sheet – Utah: 2011-2015

Inventory Additions & Removals	2011	2012	2013	2014	2015
	(Head)	(Head)	(Head)	(Head)	(Head)
Inventory Beginning of Year [1]	740,000	760,000	740,000	700,000	610,000
Annual Pig Crop [2]	1,658,000	1,660,000	1,682,000	1,529,000	1,481,000
Inshipments	2,000	1,000	1,000	1,000	3,000
Marketings [3]	1,549,000	1,593,000	1,616,500	1,468,500	1,255,500
Farm Slaughter [4]	1,000	1,000	500	500	500
Deaths	90,000	87,000	106,000	151,000	168,000
Inventory End of Year [5]	760,000	740,000	700,000	610,000	680,000

[1] Hogs & pigs inventory is as of December 1, previous year.
[2] From November 30, previous year to December 1.
[3] Includes custom slaughter for use on farm where produced, state out-shipments, but excludes inter-farm sales within the state.
[4] Excludes custom slaughter for farmers at commercial establishments.
[5] Hogs & pigs inventory is as of December 1.

Market Hogs & Pigs: Inventory by Weight Group – Utah: December 1, 2006-2015

Year	Under 50 Pounds [1]	50-119 Pounds [1]	120-179 Pounds	180 Pounds & Over	Total Market Hogs
	(1,000 Head)	(1,000 Head)	(1,000 Head)	(1,000 Head)	(1,000 Head)
2006	273	129	115	60	577
2007	275	148	142	125	690
2008	235	170	140	120	665
2009	260	135	130	130	655
2010	260	135	130	135	660
2011	280	130	130	140	680
2012	275	130	125	130	660
2013	265	115	120	125	625
2014	220	110	110	95	535
2015	245	115	125	120	605

[1] First two weight groups "under 60 pounds" & "60 - 119 pounds" before 2008.

Hogs & Pigs: Production, Marketings & Income – Utah: 2006-2015

[Dollar values based on data received from U. S. Department of Agriculture's Agricultural Marketing Service]

Year	Production [1]	Marketings [2]	Value of Production [3]	Cash Receipts [3 4]	Value of Home Consumption	Gross Income
	(1,000 Pounds)	(1,000 Pounds)	(1,000 Dollars)	(1,000 Dollars)	(1,000 Dollars)	(1,000 Dollars)
2006	285,755	286,440	139,583	141,501	237	141,738
2007	301,090	282,870	152,190	143,698	244	143,942
2008	312,262	320,460	163,240	167,601	251	167,852
2009	324,227	326,130	153,912	154,912	228	155,140
2010	303,829	301,380	184,623	183,232	291	183,523
2011	302,804	301,380	209,304	208,266	332	208,598
2012	283,570	286,488	192,252	194,200	245	194,445
2013	287,097	292,010	210,555	213,969	167	214,136
2014	265,717	275,755	229,904	238,181	198	238,379
2015	254,698	246,263	161,658	156,596	145	156,741

[1] Adjustments made for changes in inventory & for inshipments.
[2] Excludes custom slaughter for use on farms where produced & interfarm sales within the State.
[3] Includes allowance for higher average price of State inshipments & outshipments of feeder pigs.
[4] Receipts from marketings & sale of farm slaughter.

Commercial Hog Slaughter – Utah: Monthly 2014-2015

Month	Number Slaughtered		Total Live Weight		Average Live Weight	
	2014	2015	2014	2015	2014	2015
			(1,000 Pounds)	(1,000 Pounds)	(Pounds)	(Pounds)
January	6,000	3,500	957	573	160	163
February	3,100	3,500	699	540	222	155
March	2,300	3,700	519	642	230	175
April	2,700	4,500	533	680	196	151
May	3,000	3,800	590	661	194	175
June	3,200	3,500	704	581	223	165
July	3,600	3,800	687	630	192	164
August	4,400	4,600	783	1,017	180	222
September	3,800	4,500	616	898	164	198
October	4,100	4,900	626	871	154	179
November	3,300	4,600	523	825	156	181
December	4,300	5,800	637	857	149	147
Annual Total [1]	43,600	50,700	7,873	8,777	180	173

[1] Totals may not add due to rounding

Sheep & Lambs: Inventory by Class & Lamb Crop – Utah: January 1, 2012-2016

Class	2012	2013	2014	2015	2016
	(Head)	(Head)	(Head)	(Head)	(Head)
All Sheep & Lambs [1]	305,000	295,000	280,000	290,000	285,000
Sheep & Lambs Kept for Breeding					
All Breeding Sheep & Lambs	280,000	275,000	260,000	270,000	265,000
Ewes	230,000	225,000	215,000	220,000	215,000
Rams	9,000	9,000	8,000	10,000	8,000
Replacement Lambs	41,000	41,000	37,000	40,000	42,000
Market Sheep & Lambs					
Total Market Sheep & Lambs	25,000	20,000	20,000	20,000	20,000
Market Sheep	4,000	2,000	2,000	2,000	1,000
Market Lambs	21,000	18,000	18,000	18,000	19,000
Market Lambs by Size Group					
Under 65 Pounds	2,000	1,000	1,000	2,000	2,000
65 - 84 Pounds	2,000	2,000	2,000	2,000	3,000
85 - 105 Pounds	6,000	5,000	7,000	5,000	7,000
Over 105 Pounds	11,000	10,000	8,000	9,000	7,000
Deaths					
Sheep	13,000	13,000	11,000	10,000	(2)
Lambs	18,000	18,000	16,000	15,000	(2)
Units	Lamb Crop & Value of Inventory				
Lamb Crop [3] (Head)	235,000	225,000	235,000	230,000	(2)
Lambing Rate [4] (Lambs/100 Ewes)	102	100	109	105	(2)
Value per Head [5] (Dollars)	276	205	185	234	223

[1] All sheep includes new crop lambs. New crop lambs are lambs born after September 30, the previous year.
[2] Data available January 31, 2017
[3] Total for the year. Lamb crop defined as lambs marked, docked or branded.
[4] Not strictly a lambing rate. Represents lamb crop expressed as a percent of ewes 1 year old & older on hand at the beginning of the year.
[5] Average value of all sheep, including lambs, at the beginning of the year.

Wool: Production & Value – Utah: 2011-2015

Units	2011	2012	2013	2014	2015
Sheep & Lambs Shorn [1] (Head)	275,000	280,000	240,000	245,000	255,000
Weight per Fleece (Pounds)	8.7	8.9	9.2	9.2	9.4
Shorn Wool Production (1,000 Pounds)	2,400	2,500	2,200	2,260	2,390
Average Price per Pound (Dollars)	1.90	1.60	1.60	1.80	1.70
Value (1,000 Dollars)	4,560	4,000	3,520	4,068	4,063

[1] Includes shearing at commercial feeding yards.

Sheep & Lamb: Lamb Crop, Farm Slaughter & Death Loss – Utah: 2007-2016

Year	Ewes 1 Year & Older January 1	Lambs per 100 Ewes January 1	Lamb Crop [1]	Farm Slaughter [2]	Deaths	
					Sheep	Lambs
	(1,000 Head)	(Number)	(1,000 Head)	(1,000 Head)	(1,000 Head)	(1,000 Head)
2007	215.0	105	225.0	4.0	11.0	18.0
2008	210.0	110	230.0	4.0	12.0	16.0
2009	220.0	105	230.0	4.0	13.5	16.0
2010	215.0	102	220.0	6.0	12.0	15.0
2011	210.0	112	235.0	6.0	12.0	15.0
2012	230.0	102	235.0	6.0	13.0	18.0
2013	225.0	100	225.0	6.1	13.0	18.0
2014	215.0	109	235.0	6.1	11.0	16.0
2015	220.0	105	230.0	6.2	10.0	15.0
2016	215.0	(3)	(3)	(3)	(3)	(3)

[1] Lamb crop is defined as lambs born in the eastern states & lambs docked or branded in the western states.
[2] Excludes custom slaughter for farmers at commercial establishments.
[3] Data available January 31, 2017.

Losses of Lambs Before Docking, by Cause – Utah: 2010-2015

Cause of Loss	2010	2011	2012	2013	2014	2015
Number of Head	**Head**					
Bear	(D)	300	200	200	100	100
Bobcat	(D)	(D)	200	200	200	200
Coyote	4,200	4,700	5,000	5,800	5,200	5,000
Dog	(D)	300	500	300	100	100
Mountain Lion	100	300	200	500	500	500
Foxes	(D)	(D)	100	200	400	400
Wolves	(D)	(D)	(D)	(D)	(D)	(D)
Eagles	800	600	600	400	700	700
Ravens	(D)	(D)	100	100	300	200
Other/Unknown [1]	3,100	1,600	1,400	200	100	100
Total Predators	**8,200**	**7,800**	**8,300**	**7,900**	**7,600**	**7,300**
Diseases	500	(D)	800	700	1,100	1,100
Enterotoxaemia	200	(D)	100	200	200	200
Weather Conditions	5,000	5,600	4,000	2,800	2,700	2,500
Lambing Complications	2,200	1,900	2,200	1,300	1,900	1,800
Old Age	NA	NA	NA	NA	NA	NA
On Back	(D)	(D)	100	(D)	(D)	(D)
Poison	(D)	(D)	300	100	100	100
Theft	(D)	(D)	100	(D)	(D)	(D)
Other/Unknown [1]	3,200	2,700	2,100	1,500	2,900	3,000
Total Non-Predators	**11,100**	**10,200**	**9,700**	**6,600**	**8,900**	**8,700**
Total Losses	**19,300**	**18,000**	**18,000**	**14,500**	**16,500**	**16,000**

Foot notes at bottom of page.

Losses of Lambs After Docking, by Cause – Utah: 2010-2015

Cause of Loss	2010	2011	2012	2013	2014	2015
Number of Head	**Head**					
Bear	1,300	1,000	1,800	1,700	1,700	1,700
Bobcat	(D)	(D)	500	100	200	200
Coyote	6,700	6,900	8,500	9,400	8,500	7,800
Dog	(D)	700	200	500	200	200
Mountain Lion	500	1,100	1,800	1,700	900	800
Foxes	(D)	(D)	100	(D)	200	200
Wolves	(D)	(D)	100	(D)	(D)	(D)
Eagles	700	200	100	300	100	100
Ravens	(D)	(D)	100	(D)	(D)	(D)
Other/Unknown [1]	1,900	1,100	800	400	300	100
Total Predators	**11,100**	**11,000**	**14,000**	**14,100**	**12,100**	**11,100**
Diseases	300	400	400	600	100	100
Enterotoxaemia	500	(D)	200	100	200	200
Weather Conditions	600	900	700	600	400	400
Lambing Complications	NA	NA	NA	NA	NA	NA
Old Age	NA	NA	NA	NA	NA	NA
On Back	(D)	(D)	100	(D)	(D)	(D)
Poison	(D)	500	600	100	300	300
Theft	(D)	(D)	100	300	100	100
Other/Unknown [1]	2,500	2,200	1,900	2,200	2,800	2,800
Total Non-Predators	**3,900**	**4,000**	**4,000**	**3,900**	**3,900**	**3,900**
Total Losses	**15,000**	**15,000**	**18,000**	**18,000**	**16,000**	**15,000**

(D) indicates un-published: i.e. less than 100 head.
[1] Other/unknown includes other & unknown causes combined with un-published causes.
Totals may not add due to rounding.

Losses of Sheep and Lambs Combined, by Cause – Utah: 2010-2015 [1]

Cause of Loss	2010	2011	2012	2013	2014	2015
Number of Head			**Head**			
Bear	1,900	1,800	2,800	2,700	2,900	2,800
Bobcat	(D)	(D)	800	300	500	500
Coyote	12,800	13,700	16,500	18,400	16,500	15,200
Dog	800	1,400	1,300	1,200	500	500
Mountain Lion	900	2,100	2,500	2,900	2,100	2,000
Foxes	500	(D)	200	200	700	600
Wolves	(D)	(D)	100	(D)	(D)	(D)
Eagles	1,500	800	700	700	800	800
Ravens	(D)	(D)	200	100	300	200
Other/Unknown [2]	4,900	3,400	2,500	900	600	400
Total Predators	**23,300**	**23,200**	**27,600**	**27,400**	**24,900**	**23,000**
Diseases	1,200	1,500	1,700	2,100	1,500	1,500
Enterotoxaemia	900	500	700	500	500	500
Weather Conditions	6,300	8,000	5,200	5,100	3,300	3,100
Lambing Complications	3,800	2,400	3,100	1,900	2,800	2,600
Old Age	1,500	1,800	2,900	1,700	1,500	1,400
On Back	(D)	(D)	500	(D)	100	100
Poison	1,200	1,300	1,400	900	1,300	1,200
Theft	(D)	(D)	300	300	100	100
Other/Unknown [2]	8,100	6,300	5,600	5,600	7,500	7,500
Total Non-Predators	**23,000**	**21,800**	**21,400**	**18,100**	**18,600**	**18,000**
Total Losses	**46,300**	**45,000**	**49,000**	**45,500**	**43,500**	**41,000**
Percent of Total by Cause			**Percent**			
Bear	4.1	4.0	5.7	5.9	6.7	6.8
Bobcat	(D)	(D)	1.6	0.7	1.1	1.2
Coyote	27.6	30.4	33.7	40.4	37.9	37.1
Dog	1.7	3.1	2.7	2.6	1.1	1.2
Mountain Lion	1.9	4.7	5.1	6.4	4.8	4.9
Foxes	1.1	(D)	0.4	0.4	1.6	1.5
Wolves	(D)	(D)	0.2	(D)	(D)	(D)
Eagles	3.2	1.8	1.4	1.5	1.8	2.0
Ravens	(D)	(D)	0.4	0.2	0.7	0.5
Other/Unknown [2]	10.6	7.6	5.1	2.0	1.4	1.0
Total Predators	**50.3**	**51.6**	**56.3**	**60.2**	**57.2**	**56.1**
Diseases	2.6	3.3	3.5	4.6	3.4	3.7
Enterotoxaemia	1.9	1.1	1.4	1.1	1.1	1.2
Weather Conditions	13.6	17.8	10.6	11.2	7.6	7.6
Lambing Complications	8.2	5.3	6.3	4.2	6.4	6.3
Old Age	3.2	4.0	5.9	3.7	3.4	3.4
On Back	(D)	(D)	1.0	(D)	0.2	0.2
Poison	2.6	2.9	2.9	2.0	3.0	2.9
Theft	(D)	(D)	0.6	0.7	0.2	0.2
Other/Unknown [2]	17.5	14.0	11.4	12.3	17.2	18.3
Total Non-Predators	**49.7**	**48.4**	**43.7**	**39.8**	**42.8**	**43.9**
Total Losses	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Dollar Value of Losses by Cause			**1,000 dollars**			
Bear	200	335	491	434	538	547
Bobcat	(D)	(D)	133	47	91	94
Coyote	1,144	2,438	2,790	2,925	2,988	2,838
Dog	89	261	242	194	93	99
Mountain Lion	96	398	426	464	388	390
Foxes	45	(D)	32	31	126	108
Wolves	(D)	(D)	16	(D)	(D)	(D)
Eagles	114	134	111	109	142	144
Ravens	(D)	(D)	32	16	53	36
Other/Unknown [2]	456	635	414	146	111	81
Total Predators	**2,144**	**4,201**	**4,687**	**4,366**	**4,529**	**4,336**
Diseases	127	323	300	341	273	283
Enterotoxaemia	87	97	135	82	91	94
Weather Conditions	541	1,442	853	824	590	567
Lambing Complications	436	436	545	307	516	502
Old Age	253	419	635	294	298	312
On Back	(D)	(D)	98	(D)	20	22
Poison	156	270	252	152	250	250
Theft	(D)	(D)	54	47	18	18
Other/Unknown [2]	894	1,181	982	906	1,369	1,422
Total Non-Predators	**2,494**	**4,168**	**3,854**	**2,953**	**3,424**	**3,470**
Total Losses	**4,638**	**8,369**	**8,541**	**7,319**	**7,953**	**7,805**

(D) indicates un-published: i.e. less than 100 head.
[1] Lamb losses include both before & after docking losses.
[2] Other/unknown includes other & unknown causes combined with un-published causes.
Totals may not add due to rounding.

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Losses of Sheep, by Cause – Utah: 2010-2015

Cause of Loss	2010	2011	2012	2013	2014	2015
Number of Head			**Head**			
Bear	600	500	800	800	1,100	1,000
Bobcat	(D)	(D)	100	(D)	100	100
Coyote	1,900	2,100	3,000	3,200	2,800	2,400
Dog	300	400	600	400	200	200
Mountain Lion	300	700	500	700	700	700
Foxes	(D)	(D)	(D)	(D)	100	(D)
Wolves	(D)	(D)	(D)	(D)	(D)	(D)
Eagles	(D)	(D)	(D)	(D)	(D)	(D)
Ravens	(D)	(D)	(D)	(D)	(D)	(D)
Other/Unknown [1]	900	700	300	300	200	200
Total Predators	**4,000**	**4,400**	**5,300**	**5,400**	**5,200**	**4,600**
Diseases	400	1,100	500	800	300	300
Enterotoxaemia	200	(D)	400	200	100	100
Weather Conditions	700	1,500	500	1,700	200	200
Lambing Complications	1,600	500	900	600	900	800
Old Age	1,500	1,800	2,900	1,700	1,500	1,400
On Back	(D)	(D)	300	(D)	100	100
Poison	700	800	500	700	900	800
Theft	(D)	(D)	100	(D)	(D)	(D)
Other/Unknown [1]	2,900	1,900	1,600	1,900	1,800	1,700
Total Non-Predators	**8,000**	**7,600**	**7,700**	**7,600**	**5,800**	**5,400**
Total Losses	**12,000**	**12,000**	**13,000**	**13,000**	**11,000**	**10,000**
Percent of Total by Cause			**Percent**			
Bear	5.0	4.2	6.2	6.2	10.0	10.0
Bobcat	(D)	(D)	0.8	(D)	0.9	1.0
Coyote	15.8	17.5	23.1	24.6	25.5	24.0
Dog	2.5	3.3	4.6	3.1	1.8	2.0
Mountain Lion	2.5	5.8	3.8	5.4	6.4	7.0
Foxes	(D)	(D)	(D)	(D)	0.9	(D)
Wolves	(D)	(D)	(D)	(D)	(D)	(D)
Eagles	(D)	(D)	(D)	(D)	(D)	(D)
Ravens	(D)	(D)	(D)	(D)	(D)	(D)
Other/Unknown [1]	7.5	5.8	2.3	2.3	1.8	2.0
Total Predators	**33.3**	**36.7**	**40.8**	**41.5**	**47.3**	**46.0**
Diseases	3.3	9.2	3.8	6.2	2.7	3.0
Enterotoxaemia	1.7	(D)	3.1	1.5	0.9	1.0
Weather Conditions	5.8	12.5	3.8	13.1	1.8	2.0
Lambing Complications	13.3	4.2	6.9	4.6	8.2	8.0
Old Age	12.5	15.0	22.3	13.1	13.6	14.0
On Back	(D)	(D)	2.3	(D)	0.9	1.0
Poison	5.8	6.7	3.8	5.4	8.2	8.0
Theft	(D)	(D)	0.8	(D)	(D)	(D)
Other/Unknown [1]	24.2	15.8	12.3	14.6	16.4	17.0
Total Non-Predators	**66.7**	**63.3**	**59.2**	**58.5**	**52.7**	**54.0**
Total Losses	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Dollar Value of Losses by Cause			**1,000 dollars**			
Bear	101	117	175	138	218	223
Bobcat	(D)	(D)	22	(D)	20	22
Coyote	320	489	657	554	556	534
Dog	51	94	131	69	40	45
Mountain Lion	51	163	110	121	139	156
Foxes	(D)	(D)	(D)	(D)	20	(D)
Wolves	(D)	(D)	(D)	(D)	(D)	(D)
Eagles	(D)	(D)	(D)	(D)	(D)	(D)
Ravens	(D)	(D)	(D)	(D)	(D)	(D)
Other/Unknown [1]	161	175	66	52	40	45
Total Predators	**684**	**1,038**	**1,161**	**934**	**1,032**	**1,024**
Diseases	68	256	110	138	60	67
Enterotoxaemia	34	(D)	88	35	20	22
Weather Conditions	118	350	110	294	40	45
Lambing Complications	270	117	197	104	179	178
Old Age	253	419	635	294	298	312
On Back	(D)	(D)	66	(D)	20	22
Poison	118	186	110	121	179	178
Theft	(D)	(D)	22	(D)	(D)	(D)
Other/Unknown [1]	496	452	350	329	357	378
Total Non-Predators	**1,357**	**1,780**	**1,688**	**1,315**	**1,152**	**1,202**
Total Losses	**2,041**	**2,818**	**2,849**	**2,249**	**2,184**	**2,225**

(D) indicates un-published: i.e. less than 100 head.
[1] Other/unknown includes other & unknown causes combined with un-published causes.
Totals may not add due to rounding.
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Losses of All Lambs, by Cause – Utah: 2010-2015 [1]

Cause of Loss	2010	2011	2012	2013	2014	2015
Number of Head	**Head**					
Bear	1,300	1,300	2,000	1,900	1,800	1,800
Bobcat	(D)	(D)	700	300	400	400
Coyote	10,900	11,600	13,500	15,200	13,700	12,800
Dog	500	1,000	700	800	300	300
Mountain Lion	600	1,400	2,000	2,200	1,400	1,300
Foxes	500	(D)	200	200	600	600
Wolves	(D)	(D)	100	(D)	(D)	(D)
Eagles	1,500	800	700	700	800	800
Ravens	(D)	(D)	200	100	300	200
Other/Unknown [2]	4,000	2,700	2,200	600	400	200
Total Predators	**19,300**	**18,800**	**22,300**	**22,000**	**19,700**	**18,400**
Diseases	800	400	1,200	1,300	1,200	1,200
Enterotoxaemia	700	(D)	300	300	400	400
Weather Conditions	5,600	6,500	4,700	3,400	3,100	2,900
Lambing Complications	2,200	1,900	2,200	1,300	1,900	1,800
Old Age	NA	NA	NA	NA	NA	NA
On Back	(D)	(D)	200	(D)	(D)	(D)
Poison	500	500	900	200	400	400
Theft	(D)	(D)	200	300	100	100
Other/Unknown [2]	5,200	4,900	4,000	3,700	5,700	5,800
Total Non-Predators	**15,000**	**14,200**	**13,700**	**10,500**	**12,800**	**12,600**
Total Losses	**34,300**	**33,000**	**36,000**	**32,500**	**32,500**	**31,000**
Percent of Total by Cause	**Percent**					
Bear	3.8	3.9	5.6	5.8	5.5	5.8
Bobcat	(D)	(D)	1.9	0.9	1.2	1.3
Coyote	31.8	35.2	37.5	46.8	42.2	41.3
Dog	1.5	3.0	1.9	2.5	0.9	1.0
Mountain Lion	1.7	4.2	5.6	6.8	4.8	4.2
Foxes	1.5	(D)	0.6	0.6	1.8	1.9
Wolves	(D)	(D)	0.3	(D)	(D)	(D)
Eagles	4.4	2.4	1.9	2.2	2.5	2.6
Ravens	(D)	(D)	0.6	0.3	0.9	0.7
Other/Unknown [2]	11.7	8.2	6.1	1.8	1.2	0.7
Total Predators	**56.3**	**57.0**	**61.9**	**67.7**	**60.6**	**59.4**
Diseases	2.3	1.2	3.3	4.0	3.7	3.9
Enterotoxaemia	2.0	(D)	0.8	0.9	1.2	1.3
Weather Conditions	16.3	19.7	13.1	10.5	9.5	9.4
Lambing Complications	6.4	5.8	6.1	4.0	5.8	5.8
Old Age	NA	NA	NA	NA	NA	NA
On Back	(D)	(D)	0.6	(D)	(D)	(D)
Poison	1.5	1.5	2.5	0.6	1.2	1.3
Theft	(D)	(D)	0.6	0.9	0.3	0.3
Other/Unknown [2]	15.2	14.8	11.1	11.4	17.5	18.7
Total Non-Predators	**43.7**	**43.0**	**38.1**	**32.3**	**39.4**	**40.6**
Total Losses	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Dollar Value of Losses by Cause	**1,000 dollars**					
Bear	99	218	316	296	320	324
Bobcat	(D)	(D)	111	47	71	72
Coyote	824	1,949	2,133	2,371	2,432	2,304
Dog	38	168	111	125	53	54
Mountain Lion	45	235	316	343	249	234
Foxes	38	(D)	32	31	107	108
Wolves	(D)	(D)	16	(D)	(D)	(D)
Eagles	113	134	111	109	142	144
Ravens	(D)	(D)	32	16	53	36
Other/Unknown [2]	303	459	348	94	71	36
Total Predators	**1,460**	**3,163**	**3,526**	**3,432**	**3,497**	**3,312**
Diseases	60	67	190	203	213	216
Enterotoxaemia	53	(D)	47	47	71	72
Weather Conditions	423	1,092	743	530	550	522
Lambing Complications	166	319	348	203	337	324
Old Age	NA	NA	NA	NA	NA	NA
On Back	(D)	(D)	32	(D)	(D)	(D)
Poison	38	84	142	31	71	72
Theft	(D)	(D)	32	47	18	18
Other/Unknown [2]	397	826	632	577	1,012	1,044
Total Non-Predators	**1,137**	**2,388**	**2,165**	**1,638**	**2,272**	**2,268**
Total Losses	**2,597**	**5,551**	**5,691**	**5,070**	**5,769**	**5,580**

(D) indicates un-published: i.e. less than 100 head.
[1] Lamb losses include both before & after docking losses.
[2] Other/unknown includes other & unknown causes combined with un-published causes.
Totals may not add due to rounding.

Layers & Eggs – Utah: 2011-2015

	Unit	2011	2012	2013	2014	2015
		Inventory, Production & Value [1] 2011-2015				
Average Layers	(1,000 Head)	3,483	3,648	3,793	4,168	4,409
Eggs per Layer[2]	(Number)	278	276	286	285	284
Total Egg Production	(Million Eggs)	968	1,005	1,084	1,187	1,252
Value of Eggs Produced	(1,000 Dollars)	70,840	72,537	81,139	107,255	199,439
		Chicken Inventory [3], & Value December 1, 2011-2015				
Total Layers	(1,000 Head)	3,636	3,800	3,940	4,585	4,532
Total Pullets	(1,000 Head)	650	812	761	923	1,328
Total Chickens						
Total Value	(1,000 Head)	4,286	4,612	4,701	5,508	5,860
Value						
Average per Head	(Dollars)	2.70	2.50	2.60	2.50	3.10
Total Value	(1,000 Dollars)	11,572	11,530	12,223	13,770	18,166
		Chickens: Lost, Sold & Value of Sales [4] 2011-2015				
Lost [5]	(1,000 Head)	340	520	788	1,208	863
Sold for Slaughter						
Chickens Sold	(1,000 Head)	1,883	1,869	2,281	1,593	2,484
Live Weight	(1,000 Pounds)	6,026	5,981	7,299	5,098	7,949
Value of Sales	(Dollars)	6,000	6,000	7,000	5,000	8,000

[1] Estimates cover the 12 month period, December 1, previous year, through November 30.
[2] Total egg production divided by average number of layers on hand.
[3] Excludes commercial broilers.
[4] Estimates exclude broilers & cover the 12 month period December 1, the previous year through November 30.
[5] Includes rendered, died, destroyed, composted or disappeared for any reason except sold during the 12 month period.

Turkey: Production & Value – Utah: 2008-2015

Year	Production [1]	Production	Value of Production
	(1,000 Head)	(1,000 Pounds)	(1,000 Dollars)
2008	4,100	104,960	60,877
2009	3,200	81,600	40,800
2010	4,600	117,300	75,189
2011	4,300	105,350	71,849
2012	4,100	105,780	76,267
2013	4,000	108,800	72,352
2014	4,000	96,800	71,148
2015	3,600	91,440	74,158

[1] Excludes young turkeys lost.

Mink: Pelts Produced, Females Bred, Average Price & Value – Utah & United States: 2006-2015

Year	Utah		United States			
	Pelts Produced	Females Bred	Pelts Produced	Females Bred	Average Marketing Price	Value of Pelts
	(1,000)	(1,000)		(1,000)	(Dollars)	(1,000 Dollars)
2006.....	623	155	2,858,800	654.1	48.40	138,366
2007.....	600	155	2,828,200	696.1	65.70	185,813
2008.....	550	156	2,820,700	691.3	41.60	117,341
2009.....	614	157	2,866,700	674.2	65.10	186,622
2010.....	678	171	2,840,200	670.2	81.90	232,612
2011.....	699	169	3,091,470	706.0	94.30	291,526
2012	(1)	179	(1)	770.0	(1)	(1)
2013.....	855	(1)	3,544,610	(1)	56.30	199,562
2014.....	959	201	3,741,150	851.5	57.70	215,864
2015.....	934	214	3,749,450	848.7	31.10	116,608

[1] Due to sequestration, the Mink report was suspended.

Pelts Produced in 2015 & Females Bred for 2016, by Type – Utah & United States [1]

Type	Pelts Produced 2015		Females Bred To Produce Kits 2016	
	Utah	United States	Utah	United States
	(Pelts)	(Pelts)	(Number)	(Number)
Black.....	310,000	1,863,700	74,000	385,900
Demi/Wild	34,000	79,280	(D)	19,420
Pastel.....	(D)	110,900	(D)	28,120
Sapphire	41,000	115,480	10,500	29,870
Blue Iris.....	2,200	278,420	710	53,470
Mahogany.....	395,000	896,840	74,000	167,300
Pearl	(D)	95,700	(D)	16,640
Lavender.....	(D)	22,460	(D)	7,750
Violet.....	(D)	59,250	(D)	14,100
White.....	(D)	205,910	(D)	43,210
Other.....	(D)	21,510	(D)	3,280
Total	**933,880**	**3,749,450**	**196,190**	**769,060**

(D) Withheld to avoid disclosing data for individual operations.
[1] Published color classes may not add to the State total to avoid disclosing individual operations.

Honey: Number of Colonies, Yield, Production, Stocks, Price, & Value – Utah: 2006-2015

[Producers with 5 or more colonies.]

Year	Honey Producing Colonies [1]	Yield per Colony	Production	Stocks December 15 [2]	Average Price per Pound [3]	Value of Production [4]
	(1,000)	(Pounds)	(1,000 Pounds)	(1,000 Pounds)	(Dollars)	(1,000 Dollars)
2006	26	50.0	1,300	299	0.98	1,274
2007	28	42.0	1,176	270	1.13	1,329
2008	28	48.0	1,344	242	1.57	2,110
2009	26	38.0	988	198	1.46	1,442
2010	26	30.0	780	195	1.53	1,193
2011	23	39.0	897	170	1.75	1,570
2012	25	38.0	950	209	1.87	1,777
2013	30	34.0	1,020	92	2.09	2,132
2014	29	28.0	812	130	2.13	1,730
2015	27	42.0	1,134	147	1.93	2,189

[1] Honey producing colonies are the maximum number of colonies from which honey was taken during the year. It is possible to take honey from colonies which did not survive the entire year.
[2] Stocks held by producers.
[3] Average price per pound based on expanded sales.
[4] Value of production is equal to production multiplied by average price per pound.

Trout: Total Value of Fish Sold & Foodsize Sales – Utah: 2006-2015

Year	Total Value of Fish Sold [1]	Foodsize (12 Inches or longer)			
		Number of Fish	Live Weight [2]	Sales	
				Total [3]	Average Price per Pound
	(Dollars)		(Pounds)	(Dollars)	(Dollars)
2006	318,000	75,000	87,000	301,000	3.46
2007	436,000	101,000	111,000	350,000	3.15
2008	535,000	109,000	124,000	433,000	3.49
2009	529,000	99,000	106,000	333,000	3.14
2010	601,000	100,000	116,000	365,000	3.15
2011	516,000	75,000	87,000	307,000	3.53
2012	472,000	90,000	100,000	330,000	3.30
2013	617,000	100,000	151,000	556,000	3.68
2014	604,000	130,000	161,000	531,000	3.30
2015	630,000	90,000	113,000	444,000	3.93

[1] Total sales excluding eggs.
[2] Due to rounding, total number of fish multiplied by the average pounds per unit may not exactly equal total live weight.
[3] Due to rounding, total number or live weight multiplied by average value per unit may not exactly equal total sales.
(D) Withheld to avoid disclosing data for individual operations.

Marketing Year Average Prices, by Commodity – Utah: 2007-2015

Commodity	Unit	2007	2008	2009	2010	2011	2012	2013	2014	2015
Wheat, All	Bu	8.30	7.97	5.92	7.43	8.26	9.59	7.94	7.07	5.18
Wheat, Winter..	Bu	8.35	7.40	5.70	7.20	7.62	8.97	7.71	6.85	4.77
Wheat, Spring..	Bu	7.35	11.30	8.69	9.27	10.90	11.50	8.66	8.58	7.00
Corn, Grain	Bu	4.18	4.40	4.52	5.75	6.97	7.59	5.47	4.13	4.70
Barley, All.....	Bu	3.99	4.41	2.56	3.43	5.53	5.87	4.17	3.13	2.97
Oats	Bu	2.65	3.20	2.50	3.60	4.35	4.40	4.42	3.75	3.61
Hay, All (Baled)..	Ton	129.00	167.00	102.00	106.00	185.00	189.00	182.00	188.00	162.00
Alfalfa.....	Ton	131.00	170.00	102.00	106.00	185.00	190.00	182.00	188.00	162.00
Other Hay	Ton	113.00	137.00	94.00	98.00	152.00	152.00	152.00	154.00	131.00
Apples, Com.	Lbs	0.33	0.29	0.30	0.25	0.22	0.26	0.48	0.22	0.33
Peaches.....	Ton	667.00	868.00	1,040.00	691.00	1,010.00	1,080.00	1,080.00	981.00	1,080.00
Cherries										
Tart	Lb	0.25	0.33	0.27	0.27	0.29	0.51	0.48	0.43	0.34
Sweet.....	Ton	1,380.00	2,440.00	1,680.00	1,330.00	1,470.00	1,450.00	2,490.00	1,500.00	854.00
Apricots.....	ton	815.00	468.00	862.00	432.00	1,290.00	919.00	1,010.00	1,510.00	(D)
Beef Cattle [1].....	Cwt	90.00	90.50	80.00	96.00	-	-	-	-	-
Milk Cows	Hd	1,620.00	1,660.00	1,220.00	1,160.00	1,290.00	1,300.00	1,290.00	1,740.00	1,930.00
Calves [1]	Cwt	118.00	105.00	104.00	120.00	-	-	-	-	-
Steers & Heifers [1]	Cwt	93.60	94.00	83.00	99.00	-	-	-	-	-
Cows [1]	Cwt	42.00	43.00	42.00	54.00	-	-	-	-	-
Sheep [1]	Cwt	27.90	25.00	30.20	47.80	-	-	-	-	-
Lambs [1].....	Cwt	98.50	102.00	99.90	126.00	-	-	-	-	-
Hogs [1]	Cwt	50.80	52.30	47.50	60.70	-	-	-	-	-
Honey	Lb	1.13	1.57	1.46	1.53	1.75	1.87	2.09	2.13	1.93
Trout (12 In. +)...	Lb	N/A	N/A	N/A	3.15	3.53	3.30	3.68	3.30	3.93
Eggs.....	Doz	0.662	0.95	0.68	0.83	0.88	0.87	0.90	1.08	1.91
Milk, All	Cwt	18.90	18.10	12.20	16.20	19.60	17.60	19.50	23.70	17.00

(D) Withheld to avoid disclosing data for individual operations.
[1] Livestock prices (excluding milk cows per head) discontinued 2011.
N/A Not available

Prices Received: Monthly Averages Selected Commodities – Utah: 2006-2015

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	All Barley											
	(Dollars per Bu)	(Dollars per Bu)	(Dollars per Bu)	(Dollars per Bu)	(Dollars per Bu)	(Dollars per Bu)	(Dollars per Bu)	(Dollars per Bu)	(Dollars per Bu)	(Dollars per Bu)	(Dollars per Bu)	(Dollars per Bu)
2006	2.34	2.11	2.17	2.29	2.20	(S)	2.36	2.39	2.58	2.95	2.72	3.40
2007	3.65	3.91	3.70	3.18	3.72	(S)	3.38	3.39	4.71	5.59	5.22	4.99
2008	6.03	(S)	4.76	(S)	(S)	(S)	(S)	4.56	4.45	4.07	(S)	(S)
2009	(S)	(S)	(S)	(S)	3.23	(S)	(S)	2.50	2.25	2.14	2.49	2.72
2010	2.89	3.03	2.95	2.91	2.97	3.21	2.66	2.88	3.05	3.11	3.73	4.35
2011	4.38	4.49	5.00	5.61	(D)	5.38	(D)	5.55	5.80	5.18	5.43	5.53
2012	(D)	5.19	(D)	5.22	(D)	5.15	5.79	5.96	5.91	5.80	5.95	(D)
2013	5.73	(D)	5.68	(D)	5.80	5.76	(D)	4.32	(D)	3.91	(S)	3.84
2014	(D)	3.88	4.08	4.11	4.08	5.18	3.87	3.55	(D)	(D)	(D)	(D)
2015	(D)	(D)	(D)	(D)	(D)	(D)	2.84	(D)	(D)	(D)	(D)	3.56
	Milk [1]											
	(Dollars per Cwt)	(Dollars per Cwt)	(Dollars per Cwt)	(Dollars per Cwt)	(Dollars per Cwt)	(Dollars per Cwt)	(Dollars per Cwt)	(Dollars per Cwt)	(Dollars per Cwt)	(Dollars per Cwt)	(Dollars per Cwt)	(Dollars per Cwt)
2006	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
2007	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
2008	20.20	18.70	18.70	18.20	18.50	19.50	19.00	17.80	17.40	17.20	6.70	15.70
2009	12.70	10.80	10.90	11.20	10.70	10.90	10.60	11.60	12.40	14.30	14.70	16.00
2010	15.70	15.40	14.90	14.20	15.10	15.60	15.80	16.70	17.40	18.40	18.10	17.00
2011	16.80	18.40	20.10	19.60	19.50	20.50	20.40	21.30	20.60	19.10	19.50	19.00
2012	18.20	16.80	16.50	15.70	15.10	14.60	15.80	17.40	18.80	21.00	21.80	20.60
2013	19.90	19.10	18.60	18.80	19.20	19.10	18.20	18.50	19.50	20.50	21.20	21.50
2014	22.30	24.10	24.10	24.60	24.40	23.00	22.50	23.80	25.00	24.90	23.80	21.50
2015	17.80	16.50	16.40	16.40	16.70	16.90	16.70	16.70	17.00	17.40	18.40	17.80

(S) Insufficient number of reports to establish an estimate.
(D) Withheld to avoid disclosing data for individual operations.
[1] Monthly milk price estimates began 2008.

Prices Received: Monthly Averages Selected Commodities – Utah: 2006-2015 (Continued)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	All Hay (Baled)											
	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)
2006	93.00	99.00	95.00	104.00	98.00	100.00	100.00	99.00	96.00	97.00	98.00	100.00
2007	99.00	104.00	104.00	109.00	119.00	129.00	126.00	129.00	131.00	131.00	133.00	138.00
2008	139.00	143.00	140.00	148.00	154.00	163.00	172.00	173.00	168.00	168.00	175.00	157.00
2009	149.00	145.00	144.00	130.00	135.00	105.00	100.00	105.00	105.00	100.00	105.00	100.00
2010	90.00	100.00	100.00	95.00	95.00	100.00	100.00	100.00	108.00	108.00	108.00	109.00
2011	109.00	110.00	120.00	159.00	161.00	173.00	199.00	183.00	181.00	200.00	187.00	191.00
2012	189.00	175.00	173.00	189.00	205.00	198.00	199.00	187.00	187.00	187.00	182.00	192.00
2013	183.00	184.00	175.00	182.00	190.00	190.00	194.00	186.00	186.00	175.00	170.00	170.00
2014	174.00	180.00	175.00	170.00	170.00	170.00	194.00	204.00	205.00	199.00	185.00	179.00
2015	180.00	180.00	170.00	175.00	175.00	175.00	165.00	159.00	160.00	160.00	160.00	160.00
	Alfalfa Hay (Baled)											
	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)
2006	95.00	100.00	96.00	106.00	98.00	101.00	101.00	101.00	97.00	99.00	99.00	101.00
2007	100.00	105.00	105.00	110.00	120.00	130.00	130.00	130.00	132.00	132.00	135.00	140.00
2008	145.00	145.00	145.00	150.00	155.00	165.00	175.00	175.00	170.00	172.00	180.00	162.00
2009	150.00	145.00	150.00	140.00	135.00	105.00	100.00	105.00	105.00	100.00	105.00	100.00
2010	90.00	100.00	100.00	95.00	95.00	100.00	100.00	100.00	108.00	108.00	108.00	109.00
2011	109.00	110.00	120.00	160.00	161.00	173.00	200.00	184.00	181.00	200.00	187.00	192.00
2012	189.00	175.00	173.00	189.00	205.00	198.00	200.00	188.00	187.00	187.00	182.00	192.00
2013	183.00	184.00	175.00	183.00	191.00	190.00	195.00	187.00	187.00	175.00	170.00	170.00
2014	175.00	180.00	175.00	170.00	170.00	170.00	195.00	205.00	205.00	200.00	185.00	180.00
2015	180.00	180.00	170.00	175.00	175.00	175.00	165.00	160.00	160.00	160.00	160.00	160.00
	All Other Hay (Baled)											
	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)	(Dollars per Ton)
2006	80.00	85.00	85.00	90.00	75.00	81.00	81.00	76.00	72.00	72.00	72.00	75.00
2007	75.00	80.00	80.00	85.00	93.00	110.00	105.00	110.00	120.00	120.00	120.00	120.00
2008	120.00	120.00	125.00	130.00	145.00	130.00	140.00	140.00	145.00	135.00	130.00	135.00
2009	135.00	140.00	130.00	115.00	130.00	100.00	90.00	90.00	85.00	100.00	(D)	90.00
2010	85.00	100.00	105.00	90.00	85.00	95.00	100.00	85.00	99.00	99.00	99.00	99.00
2011	99.00	100.00	106.00	132.00	133.00	141.00	157.00	148.00	159.00	163.00	150.00	154.00
2012	152.00	142.00	141.00	152.00	163.00	158.00	160.00	151.00	150.00	147.00	147.00	154.00
2013	148.00	148.00	142.00	148.00	153.00	153.00	165.00	155.00	150.00	155.00	145.00	145.00
2014	145.00	145.00	140.00	140.00	140.00	140.00	160.00	165.00	165.00	160.00	150.00	145.00
2015	145.00	145.00	135.00	140.00	140.00	140.00	135.00	130.00	130.00	130.00	130.00	130.00

(D) Withheld to avoid disclosing data for individual operations.

Farm Labor: Number Hired, Wage Rates, & Hours Worked – Mountain II Region: July 2015, October 2015, January 2016, & April 2016 [1] [2]

	July 2015	October 2015	January 2016	April 2016
Hired Workers				
Hired Workers	21,000	18,000	11,000	14,000
Expected to be Employed				
150 Days or More	15,000	14,000	10,000	12,000
149 Days or Less	6,000	4,000	1,000	2,000
Hours Worked (per Week)				
Hours Worked by Hired Workers	45.0	44.4	40.3	41.3
Wage Rates (Dollars per Hours)				
Wage Rates for all Hired Workers	11.38	11.70	13.42	12.79
Type of Worker				
Field	11.12	11.49	11.66	11.26
Livestock	10.56	10.64	12.26	11.95
Field & Livestock Combined	10.90	11.15	12.00	11.55

[1] Mountain II Region includes Colorado, Nevada, & Utah.
[2] Excludes agricultural service workers.

Grazing Fees: Annual Average Rates – Utah: 2006-2015

Year	Per Animal Unit [1]	Cow-Calf	Per Head
	(Dollars per Month)	(Dollars per Month)	(Dollars per Month)
2006	11.70	14.60	13.50
2007	12.90	14.60	14.20
2008	13.00	15.90	15.50
2009	13.00	16.30	15.30
2010	13.10	17.00	15.50
2011	13.20	18.60	15.80
2012	13.70	16.70	16.00
2013	14.50	18.50	16.00
2014	15.00	19.00	16.50
2015	16.00	20.00	17.00

[1] Includes animal unit plus cow-calf rate converted to animal unit (AUM) using (1 aum=cow-calf * 0.833)

County Estimates: Select Items & Years – Utah

Item	Unit	State	County					
			Beaver	Box Elder	Cache	Carbon	Daggett	Davis
2015 Production								
All Barley	(Bushel)	1,344,000	-	144,000	694,000	-	-	-
Alfalfa & Alfalfa Mix Hay	(Tons)	2,091,000	118,500	191,000	193,000	25,300	6,200	16,000
January 1, 2016								
All Cattle & Calves	(Head)	830,000	22,500	91,000	56,000	11,300	2,900	3,500
Beef Cows	(Head)	325,000	11,400	33,000	9,200	6,600	1,500	1,700
Milk Cows	(Head)	95,000	800	9,700	16,400	(D)	…	(D)
Sheep & Lambs	(Head)	285,000	(D)	38,000	1,400	14,000	100	600
Cash Receipts, 2014 [1]								
Livestock	(1,000 Dollars)	1,870,382	274,831	170,985	167,777	11,666	3,324	7,352
Crops	(1,000 Dollars)	480,735	21,286	34,408	26,497	2,229	646	31,952
Total	(1,000 Dollars)	2,351,117	296,117	205,393	194,274	13,895	3,970	39,304
2012 Census of Agriculture [2]								
Number of Farms [3]	(Number)	18,100	277	1,235	1,217	319	51	493
Land in Farms [3]	(Acres)	11,000,000	189,995	1,170,736	268,511	240,652	(D)	55,017
Harvested Cropland [4]	(Acres)	1,054,369	32,291	151,884	106,090	8,776	5,256	11,965
Irrigated Land [5]	(Acres)	1,104,257	37,615	102,925	76,289	11,128	7,294	13,809

See footnote(s) at end of table.

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County Estimates: Select Items & Years – Utah

Item	Unit	County						
		Duchesne	Emery	Garfield	Grand	Iron	Juab	Kane
2015 Production								
All Barley	(Bushel)	-	-	-	-	-	-	-
Alfalfa & Alfalfa Mix Hay	(Tons)	104,000	55,700	31,300	…	217,500	70,000	9,000
January 1, 2016								
All Cattle & Calves	(Head)	50,000	27,000	18,900	3,600	44,500	18,500	8,800
Beef Cows	(Head)	24,500	13,700	10,600	1,800	9,600	(D)	4,600
Milk Cows	(Head)	2,700	100	(D)	(D)	9,000	(D)	(D)
Sheep & Lambs	(Head)	1,500	1,400	500	(D)	35,000	(D)	1,100
Cash Receipts, 2014 [1]								
Livestock	(1,000 Dollars)	78,095	14,446	18,926	3,496	116,347	29,727	8,757
Crops	(1,000 Dollars)	19,121	5,501	3,022	2,024	47,413	7,916	657
Total	(1,000 Dollars)	97,216	19,947	21,948	5,520	163,760	37,643	9,414
2012 Census of Agriculture [2]								
Number of Farms [3]	(Number)	1,058	587	279	81	509	353	183
Land in Farms [3]	(Acres)	1,088,559	156,229	91,533	(D)	532,464	242,909	125,441
Harvested Cropland [4]	(Acres)	59,206	26,117	14,964	3,478	62,909	22,788	2,713
Irrigated Land [5]	(Acres)	100,909	51,743	19,619	4,165	61,619	20,454	3,953

See footnote(s) at end of table.

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County Estimates: Select Items & Years – Utah

Item	Unit	County							
		Millard	Morgan	Piute	Rich	Salt Lake	San Juan	Sanpete	Sevier
2015 Production									
All Barley	(Bushel)	99,000	90,000	-	-	-	-	55,000	-
Alfalfa & Alfalfa Mix Hay	(Tons)	282,000	23,300	33,900	40,200	8,000	8,200	150,000	86,000
January 1, 2016									
All Cattle & Calves	(Head)	76,000	8,000	15,400	47,500	3,200	15,300	53,000	49,500
Beef Cows	(Head)	22,500	3,500	(D)	29,000	1,500	9,800	16,000	11,900
Milk Cows	(Head)	17,200	600	(D)	…	(D)	(D)	6,800	2,800
Sheep & Lambs	(Head)	3,000	11,000	8,000	9,100	1,100	5,400	57,000	6,000
Cash Receipts, 2014 [1]									
Livestock	(1,000 Dollars)	174,255	19,832	25,000	53,059	8,495	19,112	188,430	88,685
Crops	(1,000 Dollars)	51,225	3,466	1,573	3,909	13,873	7,068	18,957	24,980
Total	(1,000 Dollars)	225,480	23,298	26,573	56,968	22,368	26,180	207,387	113,665
2012 Census of Agriculture [2]									
Number of Farms [3]	(Number)	728	301	123	158	630	746	901	674
Land in Farms [3]	(Acres)	577,405	228,678	37,843	409,359	78,162	1,608,901	284,311	122,328
Harvested Cropland [4]	(Acres)	110,858	11,104	13,089	55,613	7,023	35,018	61,694	35,005
Irrigated Land [5]	(Acres)	115,207	9,023	13,885	65,965	6,830	4,277	68,864	40,171

See footnote(s) at end of table.

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County Estimates: Select Items & Years – Utah

Item	Unit	County							
		Summit	Tooele	Uintah	Utah	Wasatch	Washington	Wayne	Weber
2015 Production									
All Barley	(Bushel)	-	-	-	119,000	-	-	-	-
Alfalfa & Alfalfa Mix Hay	(Tons)	(D)	30,000	110,000	92,000	15,400	27,800	48,000	48,500
January 1, 2016									
All Cattle & Calves	(Head)	15,400	23,500	38,500	61,000	10,200	15,500	18,500	21,000
Beef Cows	(Head)	9,000	13,500	22,000	15,900	5,700	9,000	8,600	6,000
Milk Cows	(Head)	900	(D)	700	16,300	600	100	700	4,800
Sheep & Lambs	(Head)	27,000	2,500	12,600	13,300	19,300	700	6,600	600
Cash Receipts, 2014 [1]									
Livestock	(1,000 Dollars)	32,267	40,065	50,305	176,353	15,207	12,981	20,886	39,721
Crops	(1,000 Dollars)	2,558	11,605	19,745	90,234	2,738	5,991	2,676	17,465
Total	(1,000 Dollars)	34,825	51,670	70,050	266,587	17,945	18,972	23,562	57,186
2012 Census of Agriculture [2]									
Number of Farms [3]	(Number)	618	476	1,231	2,462	450	579	187	1,121
Land in Farms [3]	(Acres)	270,061	347,024	(D)	343,077	149,224	147,991	42,361	117,415
Harvested Cropland [4]	(Acres)	15,115	18,004	48,594	75,086	9,389	8,712	13,983	27,645
Irrigated Land [5]	(Acres)	20,775	22,958	68,950	75,167	12,420	14,781	15,720	37,742

- Indicates estimates not available.
… Indicates Zero
(D) Withheld to avoid disclosing data for individual operations.
[1] Source: Bureau of Economic Analysis, U.S. Department of Commerce. All dollar estimates are in current dollars (not adjusted for inflation).
[2] These county estimates are only published once every 5 years with the Census of Agriculture.
[3] State level estimates are published annually, number of farms & land in farms for the state of Utah are for 2015
[4] Includes land from which crops were harvested or hay was cut, & land in orchards.
[5] Includes all land watered by any artificial or controlled means, such as sprinklers, furrows or ditches & spreader dikes.

County Estimates: All Barley, All Cropping Practices – Utah: 2014 & 2015 [1]

District & County	Acres				Harvested Yield		Production	
	Planted		Harvested					
	2014	2015	2014	2015	2014	2015	2014	2015
	(Acres)	(Acres)	(Acres)	(Acres)	(Bushels)	(Bushels)	(Bushels)	(Bushels)
Northern								
Box Elder	3,300	2,600	2,900	1,800	93.8	80.0	272,000	144,000
Cache	10,700	9,100	9,200	8,700	82.1	79.8	755,000	694,000
Morgan	1,800	1,200	1,500	1,000	69.3	90.0	104,000	90,000
Rich.....	700	(D)	450	(D)	93.3	(D)	42,000	(D)
Other Counties	500	1,000	350	400	57.1	80.0	20,000	32,000
Total	17,000	13,900	14,400	11,900	82.8	80.7	1,193,000	960,000
Central								
Juab	1,000	(D)	250	(D)	76.0	(D)	19,000	(D)
Millard	6,000	3,100	1,600	1,050	87.5	94.3	140,000	99,000
Sanpete	2,000	1,700	700	600	94.3	91.7	66,000	55,000
Sevier.....	1,000	(D)	650	(D)	116.9	(D)	76,000	(D)
Utah	2,000	3,400	1,300	1,300	69.2	91.5	90,000	119,000
Other Counties	(D)	1,200	(D)	550	(D)	98.2	(D)	54,000
Total	12,000	9,400	4,500	3,500	86.9	93.4	391,000	327,000
Eastern								
Other Counties	1,300	1,000	800	300	63.8	100.0	51,000	30,000
Total	1,300	1,000	800	300	63.8	100.0	51,000	30,000
Southern								
Other Counties	1,700	2,700	300	300	83.3	90.0	25,000	27,000
Total	1,700	2,700	300	300	83.3	90.0	25,000	27,000
State								
Total	**32,000**	**27,000**	**20,000**	**16,000**	**83.0**	**84.0**	**1,660,000**	**1,344,000**

(D) Withheld to avoid disclosing data for individual operations.
[1] Missing counties & counties with missing data are included in the appropriate district's "Other Counties

County Estimates: Alfalfa & Alfalfa Mixtures for Hay, All Cropping Practices – Utah: 2014 & 2015 [1]

District & County	Acres Harvested		Harvested Yield		Production	
	2014	2015	2014	2015	2014	2015
	(Acres)	(Acres)	(Tons)	(Tons)	(Tons)	(Tons)
Northern						
Box Elder	44,000	45,000	3.25	4.25	144,000	191,000
Cache	47,000	45,000	3.85	4.30	181,000	193,000
Davis	4,000	3,500	3.90	4.55	15,600	16,000
Morgan	9,000	8,500	2.95	2.75	26,500	23,300
Rich	20,000	15,000	1.70	2.70	34,200	40,200
Salt Lake	1,500	2,000	3.45	4.00	5,200	8,000
Tooele	7,000	8,000	3.50	3.75	24,500	30,000
Weber	15,500	13,000	4.20	3.75	65,000	48,500
Total	148,000	140,000	3.35	3.95	496,000	550,000
Central						
Juab	18,000	16,000	3.95	4.40	71,000	70,000
Millard	47,500	59,000	5.30	4.80	252,000	282,000
Sanpete	41,000	37,000	3.75	4.05	153,000	150,000
Sevier	24,500	23,000	4.50	3.75	110,000	86,000
Utah	26,000	22,000	4.00	4.20	104,000	92,000
Total	157,000	157,000	4.40	4.35	690,000	680,000
Eastern						
Carbon	9,500	7,000	4.15	3.60	39,500	25,300
Daggett	2,000	3,000	2.10	2.05	4,200	6,200
Duchesne	30,000	30,000	3.15	3.45	94,000	104,000
Emery	16,500	17,000	3.45	3.30	57,000	55,700
Grand	(D)	(D)	(D)	(D)	(D)	(D)
San Juan	(D)	4,400	(D)	1.85	(D)	8,200
Summit	6,000	(D)	2.85	(D)	17,000	(D)
Uintah	31,000	29,500	3.20	3.75	99,000	110,000
Wasatch	5,500	4,500	2.95	3.40	16,300	15,400
Other Counties	6,500	11,600	3.25	4.35	21,000	50,200
Total	107,000	107,000	3.25	3.50	348,000	375,000
Southern						
Beaver	24,000	25,000	4.75	4.75	114,000	118,500
Garfield	10,000	10,000	3.05	3.15	30,500	31,300
Iron	48,500	42,500	5.05	5.10	245,000	217,500
Kane	2,000	2,500	3.25	3.60	6,500	9,000
Piute	7,000	8,000	4.15	4.25	29,000	33,900
Washington	4,500	5,500	4.90	5.05	22,000	27,800
Wayne	12,000	12,500	3.90	3.85	47,000	48,000
Total	108,000	106,000	4.55	4.60	494,000	486,000
State						
Total	**520,000**	**510,000**	**3.90**	**4.10**	**2,028,000**	**2,091,000**

(D) Withheld to avoid disclosing data for individual operations.
[1] Missing counties and counties with missing data are included in the appropriate district's "Other Counties".

County Estimates: Cattle – Utah: January 1, 2015 & 2016

District & County	All Cattle		Beef Cows		Milk Cows	
	2015	2016	2015	2016	2015	2016
	(Number)	(Number)	(Number)	(Number)	(Number)	(Number)
Northern						
Box Elder	86,000	91,000	33,000	33,000	9,800	9,700
Cache	53,000	56,000	9,200	9,200	16,600	16,400
Davis	3,200	3,500	1,700	1,700	(D)	(D)
Morgan	7,500	8,000	3,400	3,500	600	600
Rich	44,500	47,500	29,000	29,000	-	-
Salt Lake	2,900	3,200	1,500	1,500	(D)	(D)
Tooele	22,000	23,500	13,600	13,500	(D)	(D)
Weber	20,000	21,000	6,000	6,000	4,900	4,800
Central						
Juab	17,400	18,500	(D)	(D)	(D)	(D)
Millard	72,000	76,000	22,500	22,500	17,500	17,200
Sanpete	49,500	53,000	15,900	16,000	6,900	6,800
Sevier	46,500	49,500	11,900	11,900	2,900	2,800
Utah	58,000	61,000	15,800	15,900	16,500	16,300
Eastern						
Carbon	10,500	11,300	6,600	6,600	(D)	(D)
Daggett	2,600	2,900	1,400	1,500	-	-
Duchesne	47,000	50,000	24,500	24,500	2,800	2,700
Emery	25,000	27,000	13,700	13,700	100	100
Grand	3,300	3,600	1,700	1,800	(D)	(D)
San Juan	14,300	15,300	9,700	9,800	(D)	(D)
Summit	14,500	15,400	8,900	9,000	900	900
Uintah	36,500	38,500	22,000	22,000	700	700
Wasatch	9,500	10,200	5,600	5,700	600	600
Southern						
Beaver	21,500	22,500	11,300	11,400	1,000	800
Garfield	17,700	18,900	10,600	10,600	(D)	(D)
Iron	41,000	44,500	9,500	9,600	8,500	9,000
Kane	8,200	8,800	4,600	4,600	(D)	(D)
Piute	14,400	15,400	(D)	(D)	(D)	(D)
Washington	14,500	15,500	9,000	9,000	100	100
Wayne	17,000	18,500	8,600	8,600	800	700
Other Counties	-	-	12,800	12,900	4,800	4,800
State Total	**780,000**	**830,000**	**324,000**	**325,000**	**96,000**	**95,000**

- Indicates Estimates not available.
(D) Withheld to avoid disclosing data for individual operations.
[1] Counties with missing data are included in "Other Counties".

County Estimates: Sheep – Utah: January 1, 2015 & 2016 [1]

District & County	All Sheep & Lambs 2015	All Sheep & Lambs 2016
	(Head)	(Head)
Northern		
Box Elder	40,500	38,000
Cache	1,700	1,400
Davis	600	600
Morgan	12,300	11,000
Rich	8,800	9,100
Salt Lake	1,000	1,100
Tooele	2,100	2,500
Weber	600	600
Central		
Juab	(D)	(D)
Millard	3,900	3,000
Sanpete	62,000	57,000
Sevier	5,500	6,000
Utah	15,000	13,300
Eastern		
Carbon	13,600	14,000
Daggett	100	100
Duchesne	1,800	1,500
Emery	2,400	1,400
Grand	(D)	(D)
San Juan	5,800	5,400
Summit	28,500	27,000
Uintah	12,900	12,600
Wasatch	17,300	19,300
Southern		
Beaver	(D)	(D)
Garfield	500	500
Iron	29,500	35,000
Kane	800	1,100
Piute	6,300	8,000
Washington	600	700
Wayne	6,300	6,600
Other Counties	9,600	8,200
State Total	**290,000**	**285,000**

(D) Withheld to avoid disclosing data for individual operations.
[1] Counties with undisclosed data are included in "Other Counties".

County Estimates: Cash Rent per Acre – Utah: 2014 & 2016 [1]

District & County	Rented for Cash [2 3 4]					
	Irrigated Cropland		Non-Irrigated Cropland		Pastureland	
	2014	2016	2014	2016	2014	2016
	(Dollars/Acre)	(Dollars/Acre)	(Dollars/Acre)	(Dollars/Acre)	(Dollars/Acre)	(Dollars/Acre)
Northern						
Box Elder	107.00	115.00	27.00	39.50	4.80	(D)
Cache	104.00	96.50	41.00	40.00	13.00	13.50
Davis	153.00	129.00	26.00	(D)	20.50	(D)
Morgan	76.00	79.50	(D)	21.50	(D)	(D)
Rich	49.00	28.50	16.00	(D)	(D)	6.50
Salt Lake	81.00	97.50	(D)	(D)	(D)	5.80
Tooele	72.50	41.00	(D)	11.00	8.30	4.00
Weber	100.00	93.00	42.50	31.00	23.00	20.00
Other Counties	(D)	(D)	19.00	(D)	(D)	(D)
Total	106.00	96.50	33.00	33.00	7.20	6.90
Central						
Juab	49.50	43.50	15.00	14.50	4.60	3.80
Millard	96.00	101.00	(D)	(D)	3.40	4.80
Sanpete	75.00	87.00	18.50	(D)	4.80	5.00
Sevier	99.50	94.50	(D)	38.50	11.50	6.60
Utah	86.50	98.00	19.50	50.00	4.90	5.70
Other Counties	(D)	(D)	16.50	20.00	(D)	(D)
Total	86.00	92.00	18.00	21.50	4.60	5.10
Eastern						
Carbon	47.00	53.00	(D)	(D)	2.20	(D)
Duchesne	63.50	59.00	(D)	(D)	(D)	(D)
Emery	50.00	47.00	(D)	11.50	1.70	2.90
San Juan	(D)	53.00	(D)	(D)	2.50	2.60
Summit	49.50	46.50	(D)	30.50	3.30	3.00
Uintah	50.00	64.50	(D)	(D)	11.00	11.00
Wasatch	59.00	74.50	(D)	24.00	7.60	8.60
Other Counties	38.00	35.00	(D)	20.50	15.00	5.70
Total	54.50	57.00	(D)	21.00	4.10	4.80
Southern						
Beaver	(D)	45.50	(D)	(D)	30.00	27.50
Garfield	62.00	52.50	(D)	(D)	(D)	8.00
Iron	116.00	99.00	(D)	(D)	2.60	2.40
Kane	(D)	71.50	(D)	(D)	(D)	3.60
Piute	45.00	62.50	(D)	(D)	(D)	8.80
Washington	96.00	96.50	(D)	(D)	(D)	4.70
Wayne	62.00	67.00	(D)	(D)	13.50	11.00
Other Counties	92.00	(D)	(D)	23.00	5.20	(D)
Total	96.50	85.50	(D)	23.00	3.70	3.40
Other Districts	(D)	(D)	19.00	(D)	(D)	(D)
State						
Total	**91.00**	**88.00**	**25.00**	**25.50**	**5.00**	**5.00**

(D)Withheld to avoid disclosing data for individual operations.
[1] Cash Rents estimated every other year
[2] Counties with missing data are included in the appropriate district's "Other Counties".
[3] Districts with missing totals are included in "Other Districts"
[4] Counties not listed may also be included in "Other Counties or "Other Districts".

Northern Utah Conventional Peach Orchard Costs and Returns, 20 Acres 2015

By
Trevor Knudsen, Kynda Curtis, Jennifer Reeve, and Brent Black

Introduction
This publication contains average costs and returns for establishing and maintaining a 20-acre peach orchard in Northern Utah. Unless otherwise indicated, information in this publication is based upon grower surveys and pricing data collected in 2014. The establishment and operating costs are meant to be "representative" of a Utah peach orchard, but should be adjusted where necessary to reflect individual situations. Site selection, peach variety, pest management, and other practices will also affect the establishment and operating costs of an orchard and should be considered by the producer.

Assumptions
Land: The site represented in this publication is established in open land with no improvements (ground levelling, for instance). It is also assumed that the site is in a location with minimal spring frost and winter cold damage. This representative orchard is a 20-acre peach orchard, which is leased at $800/acre.

Peach Trees: The cost of purchasing peach trees and planting density can vary significantly. Trees for this publication are priced at $7.75 each and the planting density is assumed at 400 trees per acre.

Irrigation: The amount of water needed to properly irrigate a peach orchard will depend on a variety of factors including site location, soil type, annual temperatures, and rainfall. The amount of water the orchard receives increases from 1.5 acre feet in year one to 3.5 acre feet in years 6-20 when orchards are in full production. This study assumes a micro sprinkler system priced at $1,500 per acre and annual water cost at $30/acre foot.

Electricity: Electricity to run the irrigation pumps is assumed at $14.22 per acre foot of water and electricity to run the cooler is assumed at $15.00 per day during the months of August and September ($900) for a total of $1,895 per acre per year during full production (years 6-20).

Marketing: Yearly marketing fees include packaging at $6 per 23 pound box (half bushel), fees and stand costs for four markets ($800), market labor costs ($2,400), and transportation to markets ($1,440).

Market Prices: "Wholesale" prices assumed in this study reflect prices paid by retail locations such as Associated Foods during 2014. "Direct Market" prices reflect prices received by producers at various farmers' markets in Northern Utah and Colorado during the 2014 market season. Approx. 20% is sold through wholesale channels and 80% through direct markets.

Yields: The possibility of a partial or full crop loss due to frost or other factors is highly likely during the 20 year orchard life. Hence, yields assume one-half crop loss every third year. An 80% pack-out rate is assumed and returns are based on the pack-out rate.

Cash Overhead: Cash overhead consists of various cash expenses paid during the year. These costs include accounting/legal costs, insurance, and office expenses.

Insurance. Insurance on farm investments vary, depending on the assets included and the amount of coverage. Property insurance provides coverage for property loss at .666 percent of the average asset value and crop insurance provides coverage for crop loss at .75 percent average yields.

Liability insurance covers accidents on the orchard. Crop and liability insurance are estimated at an annual cost of $1000 for the 20-acre orchard.

Office & Travel. Office and travel costs are estimated at $5,000 for an average year. These expenses include office supplies, telephone service, internet service, and travel expenses to educational seminars.

Accounting & Legal. Annual accounting and legal costs are estimated at $1000 for an average year for the 20-acre orchard.

Equipment: The equipment listed is adequate for a 20-25 acre orchard. Unless otherwise noted, all equipment listed is new. Equipment prices were collected from producers, equipment dealers, and other publications. Producers should consider the costs of buying new equipment versus used, as well as leasing, custom hiring, and group purchasing when establishing a new orchard as these costs will vary and have a large impact on the economic returns to the project.

Fuel and Lube. The fuel and lube for machinery is calculated at 8% the average asset value.

Investment Repairs. Annual repairs on all farm investments or capital recovery items that require maintenance are calculated at 2% of the average asset value for buildings and equipment, and at 7% for machinery and vehicles.

Capital Recovery. Capital recovery costs are the annual depreciation (opportunity cost) of all farm investments. Capital recovery costs are calculated using straight line depreciation. All equipment listed is new unless otherwise noted. The price for used machinery is calculated as one-half the new purchase price and useful life is calculated as two-thirds that of new machinery.

Salvage Value. Salvage value is 10% of the purchase price, which is an estimate of the remaining value of an investment at the end of its useful life. The salvage value for land is the purchase price, as land does not normally depreciate.

Labor: The wage rate used is representative of the net cost to the grower and is assumed at $15.00 per hour. Owner management and labor is $30,000 per year.

Costs and Returns

Table 1 shows initial investment costs required for buildings, equipment, and machinery. Table 2 shows production expenses and cash inflows during full production years (years 6-20), and assumes that once the orchard is established and fully operating, expenses and sales will be constant.

Due to the nature of orchard production, producers will not see any revenues for at least the first three years of production when peach trees aren't producing. Depending on pricing and productivity, orchards may not become profitable until the 7th or 8th year of production. A peach orchard can produce beyond 20 years, but for this analysis a 20 year orchard life is assumed. Although this publication represents a "typical" establishment and operating costs for a peach orchard, costs of establishment and prices of inputs are highly variable so each producer will need to assess costs on an individual basis.

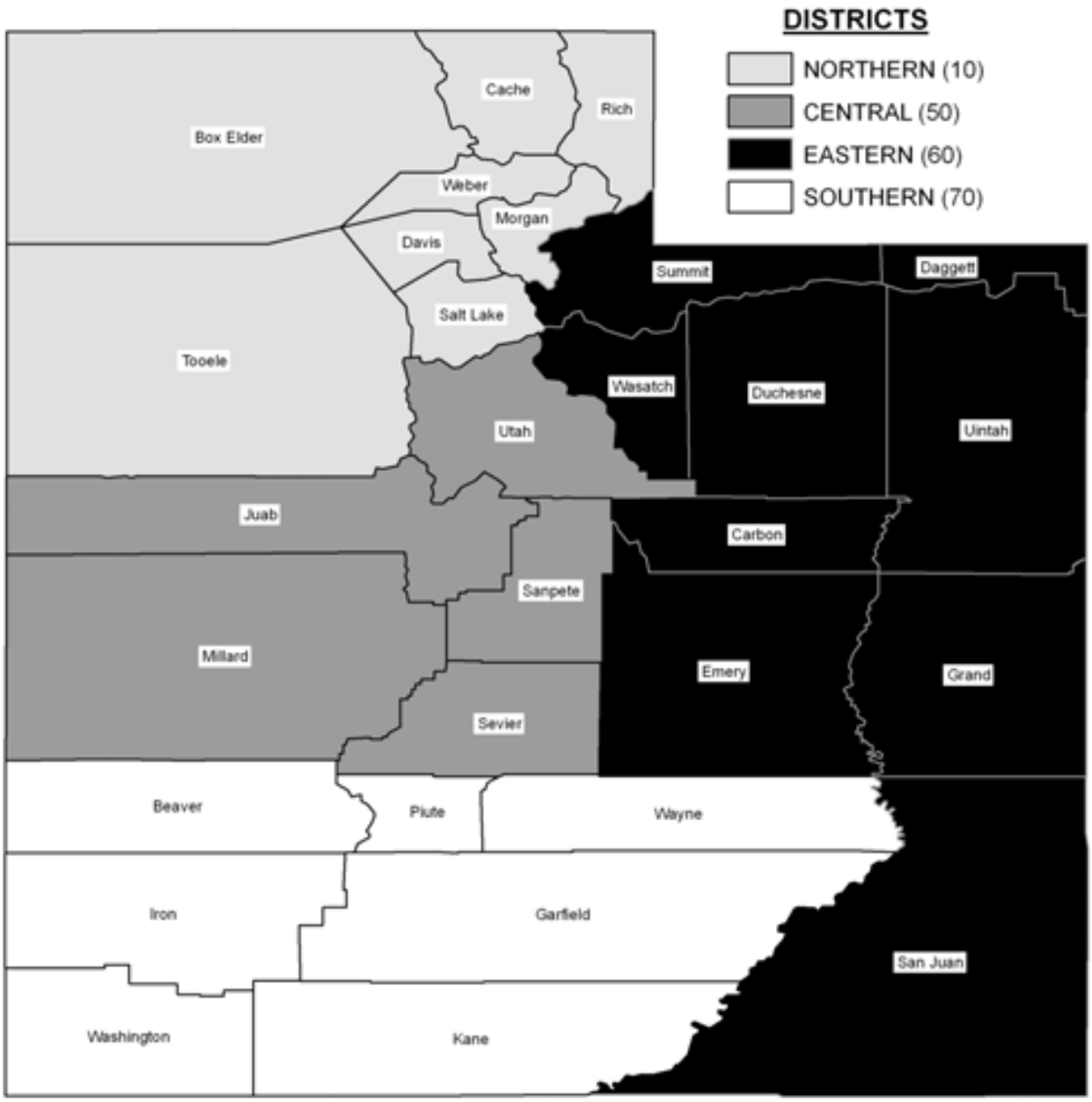
Table 1: Initial Investment Requirements - Conventional Peach Orchard

Machinery & Vehicles	Purchase Price	Salvage Value	Useful Life	Annual Capital Recovery	Annual Insurance	Annual Repairs	Annual Fuel & Lube
Tractor 35 hp	$ 25,000	$ 2,500	15	$ 1,500	$ 92	$ 963	$ 1,100
Tractor 65 hp	$ 55,000	$ 5,500	15	$ 3,300	$ 201	$ 2,118	$ 2,420
Pickup 3/4 ton	$ 40,000	$ 4,000	6	$ 6,000	$ 147	$ 1,540	$ 1,760
Refridgerated Truck (used)	$ 22,000	$ 2,200	7	$ 2,829	$ 81	$ 847	$ 968
Forklift	$ 23,000	$ 2,300	10	$ 2,070	$ 84	$ 886	$ 1,012
Wind Machine (x2)	$ 50,000	$ 5,000	15	$ 3,000	$ 183	$ 1,925	$ 2,200
4 Wheeler	$ 10,000	$ 1,000	5	$ 1,800	$ 37	$ 385	$ 440
Sub Total	$ 225,000		NA	$ 20,499	$ 824	$ 8,663	$ 9,900
Buildings, Improvements & Equipment							
Shop (40X40 & Tools)	$ 15,000	$ 1,500	15	$ 900	$ 55	$ 165	-
Temperature Controlled Storage (1500 square feet)	$ 80,000	$ 8,000	20	$ 3,600	$ 293	$ 880	-
Implements	$ 10,000	$ 1,000	10	$ 900	$ 37	$ 110	-
Irrigation System	$ 30,000	$ 3,000	20	$ 1,350	$ 110	$ 330	-
Pneumatic Shears/Compressor	$ 8,000	$ 800	10	$ 720	$ 29	$ 88	-
Tree Sprayer	$ 20,000	$ 2,000	10	$ 1,800	$ 73	$ 220	-
Flail Mower	$ 3,000	$ 300	10	$ 270	$ 11	$ 33	-
Flatbed Trailer (used)	$ 2,000	$ 200	8	$ 225	$ 7	$ 22	
Sub Total	$ 168,000	$ 16,800	NA	$ 9,765	$ 615	$ 1,848	$ -
Total Initial Investment	**$ 393,000**	**$ 16,800**	**NA**	**$ 30,264**	**$ 1,440**	**$ 10,511**	**$ 9,900**

Table 2: Conventional Peach Orchard Production Expenses-Years 6-20

Operation	Units	Unit Cost ($)	Units Per Acre	Cost Per Acre ($)	Your Estimate
Labor					
Pruning	Hrs	15	45	675	_____
Spraying	Hrs	15	5	75	_____
Mowing	Hrs	15	5	75	_____
Thinning	Hrs	15	150	2250	_____
Fertilizing	Hrs	15	2	30	_____
Irrigating	Hrs	15	30	450	_____
Picking	Hrs	15	120	1800	_____
Marketing	Hrs	15	6.4	96	_____
Irrigation					
Water	Acre Feet	30	3.5	105	_____
Fertility					
Ammonium Sulfate	Lbs	2.83	100	283	_____
Metalosate Multi Mineral	Gal	36	1	36	_____
Twig Borer					
Imidan 70WP	Lbs	10.65	4	43	_____
Coryneum Blight					
Captan 50 WP	Lbs	3.5	8	28	_____
Powdery Mildew					
Sulphur Granules	Lbs	0.4	200	80	_____
Green Peach Aphids					
Dormant Oil Spray	Gal	8.5	3	26	_____
Weeds					
Roundup	Gal	12.5	0.5	6.25	_____
Electricity					
Irrigation Pump	Annual	995	0.05	50	_____
Cooler	Annual	900	0.05	45	_____
Marketing					
Packaging	Box	6	837	5022	_____
Marketing fees	Annual	800	0.05	40	_____
Transportation	Hrs	15	6.4	96	_____
Machinery/Vehicles/Equipment					
Fuel & Lube	Annual	9900	0.05	495	_____
Repairs	Annual	10511	0.05	526	_____
Cash Overhead					
Land Rental	Acre	800	1	800	_____
Accounting/Legal	Annual	1000	0.05	50	_____
Liability/Crop Insurance	Annual	1000	0.05	50	_____
Office/Travel	Annual	5000	0.05	250	_____
Annual Investment Insurance	Annual	1440	0.05	72	_____
Owner Management/Labor	Annual	30000	0.05	1500	_____
Non Cash Overhead (Capital Recovery)					
Machinery & Vehicles	Annual	20499	0.05	1025	_____
Buildings, Improvements & Equipment	Annual	9765	0.05	488	
Total Yearly Expense Per Acre				**$16,566**	
Cash Inflows From Sales					
Wholesale Market Sales (20%)	Lbs	$ 1.06	3,080	**$ 3,265**	
Direct Market Sales (80%)	Lbs	$ 2.23	12,320	**$ 27,474**	
Net Returns (Per Acre)				**$ 14,172.88**	

UTAH COUNTIES AND DISTRICTS



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