Alabama is a water-rich state with more than 77,000 miles of streams, 3.6 million acres of wetlands, 60 miles of Gulf of Mexico coastline, the most extensive artificial reef system in the United States, and 560,000 acres of lakes, ponds, and reservoirs. Alabama’s waters are also among the most biologically diverse in North America, with over 300 species of freshwater fish as well as diverse marine fish and invertebrates, aquatic plants, reptiles, and amphibians. These rich water resources are used for drinking and other household uses, hydroelectric power, irrigation, aquaculture, commercial and recreational fisheries, transportation, industrial uses, and recreation. Demands will continue to increase as human populations expand and development increases.

The Aquatic Resources Program team provides science-based Extension programming in the areas of aquaculture (freshwater and marine), private pond and lake management, coastal resources, commercial and recreational fisheries, aquatic resource conservation, and aquatic resources K–12 curriculum development. Our team consists of statewide specialists and area specialists located strategically around the state as well as natural resource regional agents and county coordinators. Together we provide educational programming, workshops, seminars, and diagnostic services with emphasis on environmental stewardship, best management practices, and economic viability.

Project Activities and Impacts 2023

► Best practices in aquatic safety, preservation, and conservation was the subject of multiple workshops, trainings, social media posts, and publications generated by Alabama Extension aquatic resources specialists in 2023 for teachers, students, and the public.
Aquaculture Education

**Project Leader**
David Cline

**Extension Collaborator**
Phillip Waters

**Background**
Aquaculture, like agriculture, is a complex subject with numerous facets for study in educational programs. Several secondary agriculture and science teachers have realized this and integrated aquaculture into their curricula. Aquaculture is an excellent teaching tool because it easily integrates many disciplines, including biology, chemistry, economics, math, and physics. Growing fish, aquatic plants, and other living things in the classroom creates a living laboratory and promotes daily hands-on experiences that enrich the learning environment. It makes learning practical, experiential, and enjoyable for teachers and students. The issue is that very few teachers have any formal training in aquaculture or aquaponics and are unprepared to teach these classes, diminishing the potential impact.

**Approach**
This project included multiple approaches to provide aquaculture training and education opportunities to teachers, students, and the public. Among the offerings were 1 workshop, 41 tours, 40 presentations, 1 podcast interview, and 91 (7 new) online videos.
Number of Participants
3,668 youth, 2,124 adults, and 81,880 online (5,780 hours of instruction)

Audience Diversity
49.6 percent male, 51.4 percent female; 57.8 percent White, 26.6 percent Black, 6.6 percent Hispanic, 2.1 percent other

Evaluation Techniques
Workshop surveys; tour attendee interviews

Direct Impacts
$310,760 ($11,760 worth of teaching materials provided, $10,000 tour fees waived, $289,000 worth of consulting fees avoided)

Return on Investment: 28:1
Inland Aquaculture Production

Extension Collaborators
Phillip Waters, Luke Roy, David Cline, and Anita Kelly

Background

U.S. farm-raised catfish is the ninth most popular item of all fish and seafood products consumed in the United States. Americans eat 19.0 pounds of fish and seafood per person yearly, and each American eats 0.5 pounds of U.S. farm-raised catfish annually.

Alabama ranks second in U.S. catfish sales at $113 million. In 2023, the U.S. farm-raised catfish industry produced 327.8 million pounds of catfish from 55,855 acres of water. Alabama produced 96.2 million pounds from 14,100 acres, representing 30 percent of all catfish produced in the United States from 25 percent of the total U.S. catfish industry acreage. The average Alabama catfish production is 7,200 pounds per acre per year.

Two catfish processing plants are located in western Alabama: Uniontown (Perry County) and Eutaw (Greene County). There are two catfish feed mills in western Alabama: Uniontown (Perry County) and Demopolis (Marengo County). The 2020 Economic Impact of the Farm-Raised Catfish Industry in Alabama, including catfish production, feed manufacturing, and processing, reports the following: total output (sales) $307 million; total employment 2,442 (jobs); and total value added $92 million.

The Alabama catfish industry continues to face serious issues. In the early 2000s, more than 25,000 water acres including approximately 250 catfish farms in western Alabama and four processors were in production in Alabama. By 2023, this declined to 67 farms, 14,100 water acres, and two remaining catfish processors in the state.
This decline is due to several issues.

- **Feed Prices:** A dramatic surge (246 percent) in feed prices from $201 per ton in 2000 to $495 per ton in 2023

- **Competition:** Inexpensive imports (mainly from Vietnam and China) flooding the U.S. marketplace with alternative catfish-like products, such as tra, swai, and basa as well as tilapia

- **Other Economic Forces:** The COVID-19 shutdown and a decline in catfish demand that significantly reduced the size of the catfish industry in Alabama and the rest of the United States

- **Disease Losses:** Annual production losses greater than $14 million over the last 5 years due to bacterial diseases, representing the biggest challenge to the Alabama catfish industry; numerous losses caused by a virulent strain of *Aeromonas hydrophila* bacteria introduced from China

- **Fish Size:** Excessive amounts of large fish in recent harvest that are too big for the processor to accept
An inland low-salinity aquaculture industry exists in Alabama and the southeastern United States. In addition, many farmers in the Midwest are raising shrimp in low-salinity water in indoor systems. This program is designed to help sustain the existing commercial industry through Extension programming and the services of the Alabama Fish Farming Center, as well as to assist clientele seeking information on how to start a commercial aquaculture business.

The program goal is to enhance the biological and economic sustainability of the inland low-salinity commercial aquaculture industry. In 2023 this was accomplished via commercial-level on-farm demonstrations, farm visits (ninety-one on-site visits), applied on-farm research targeted directly at important stakeholder issues, workshops, social media, and Extension publications. A total of 3,089 contacts were logged in 2023 through Extension programs.
AQUATIC RESOURCES PROGRAM TEAM: PROJECT ACTIVITIES AND IMPACTS 2023

Project Leaders
Anita Kelly and Luke Roy

Non-Extension Collaborator
Timothy Bruce

Background

The total pounds lost to diseases in 2021 and 2022 were 5.1 and 6.3 million pounds, respectively, in the nearly 14,000-acre western Alabama farm-raised catfish industry. The estimated dollar damage loss due to diseases and disease-related problems in farm-raised catfish in Alabama in 2023 was $13.5 million. Best management practices have been developed that are already reducing catfish losses when followed by producers, harvesters, and fish haulers to processing plants.

Number of Participants
3,834

Audience Diversity
95 percent male, 5 percent female;
96 percent White, 2 percent Black

Conservative Direct Impact Estimate
$571,500 savings in catfish losses (12 percent reduction in catfish losses due to producers' change in behavior in the past year as a result of this team's diagnostic work and producer education (450,000 lb × $1.27/lb). Project costs of $36,600 (for 68 farm visits plus 176 AFFC diagnostic cases × $150 per case).

Return on Investment: 16:1
Alternative Aquaculture Species

Project Leaders
Anita Kelly and Luke Roy

Non-Extension Collaborators
Timothy Bruce, Ian Butts, and D. Allen Davis

Background

Currently, 92 percent of the seafood consumed in the United States is imported. Compared to other countries, we produce much of the research and development work for enhanced aquaculture development worldwide. At the same time, the United States ranks very low in the volume of seafood produced compared to other producing countries.

Seafood is the largest nonpetroleum component of our imbalance in trade, creating a $17 billion deficit in 2020. National Marine Fisheries Service reports U.S. imports of edible fishery products in 2020 were valued at $21.4 billion, a decrease of 3.3 percent from 2019. The quantity of edible imports was 6.1 billion pounds, an increase of 1.4 percent from the amount imported in 2019.

Our work in the area of alternative species focuses on means and methods that allow U.S. production businesses to compete profitably in the global seafood trade. Traditional commercial production systems have become increasingly less competitive over the past 2 decades. Featured areas of development are enhanced pond production and controlled environment systems where animals and plants are co-cultured.

We are developing improved culture systems using traditional open ponds where fish are provided with higher aeration rates. We have increased information to Alabama catfish producers on raising species such as crayfish, largemouth bass, and crappie. These methods allow farmers to further benefit from their existing capital investment in pond systems. Diversification of products will also assist catfish producers when fish prices are low.

Number of Contacts and Participants (Seminars, Workshops, and Various Media)
835

Audience Diversity
94 percent male, 6 percent female;
98 percent White, 2 percent Black

Return on Investment
It is estimated that the investment level for alternative species (food fish) throughout the southeastern United States is a combined $3 million over the last 3 years, resulting from technical support and Extension expertise. Our return on investment is 15:1 in both information disseminated across a variety of contact methods, demonstrations, and other educational opportunities as manifested in investments in production systems.

Return on Investment: 15:1
Aquaculture operations are risky business endeavors. High production costs and volatile market prices complicate financial and business planning for producers. Extension programs provide education to producers and provision of decision-support tools to new producers as they consider starting an operation as well as existing producers as they consider changes in production practices.

Extension activities included in-person and virtual presentations and Extension and newsletter articles to increase stakeholder understanding of seafood markets and economic conditions. These activities increased stakeholder knowledge of the current seafood market and economic outlook conditions. This knowledge was used to develop farm management and investment decisions. This program also improved the public understanding of US aquaculture and how market conditions impact the prices they pay for seafood. The public also benefits from economic development tied to the US aquaculture industry.
Extension Coastal Collaborators
Phillip Waters and Russell Grice

Oyster Gardening on the Northern Gulf Coast

Project Leader
P. J. Waters

Collaborating Agencies
Alabama Department of Public Health, Alabama Marine Resources, Mississippi-Alabama Sea Grant Consortium, Auburn University Shellfish Laboratory, Little Lagoon Preservation Society, and Mississippi Department of Marine Resources

Background
More than 85 percent of global oyster reefs have been lost. The northern Gulf of Mexico is home to one of the last regions where restorative efforts can be effective. Citizens of the region possess strong cultural connections to the bays and estuaries in the forms of culinary, recreational, and business interests.

Oyster reefs of this region are primary habitat for other species of importance to the way of life in these areas, and the reefs play a primary role in water-quality maintenance. Oyster gardening programs facilitate a connection between citizens and these ecological habitats central to their way of life on the coast.

In 2017, oyster gardening programs coordinated by Alabama Extension saw its citizen scientists raise nearly 74,000 advanced stocker oysters for replanting on up to 3.68 acres of reef. The economic value of this habitat potential is $71,304.

Number of Participants
210 gardeners at 105 sites on the Gulf Coast in addition to two high schools

Value of Habitat Potential
$483,763

Audience Diversity
Approximately 1:1 male to female

Return on Investment: 13.25:1
Off-Bottom Oyster Farming in the Gulf of Mexico

Project Leaders
Andrea Tarnecki and Rusty Grice

Non-Extension Collaborators
Alabama Marine Resources Division, Dauphin Island Sea Lab, Mississippi Department of Marine Resources, and Mississippi-Alabama Sea Grant Consortium

Background

Off-bottom oyster farming, common in other parts of the country, cultures oysters typically using hatchery-reared single set oysters instead of clumps of oysters usually found in the wild. They are grown to be sold commercially as a premium, high-value product.

To support the development and expansion of this industry, applied research is conducted to improve profitability, solve production issues, enhance product safety, and minimize environmental impacts. Support is provided through site visits, technical support, a monthly newsletter, symposia and workshops, and guest speakers.

Number of Participants
3,900

Events
11

Audience Diversity
59 percent male, 41 percent female; 91 percent White, 9 percent Black

Conservative Direct Impact Estimate
Production is always reported for the prior calendar year. The Alabama off-bottom oyster harvest was valued conservatively at $3.2 million, accomplished by at least ten commercial operations using approximately 45 acres of submerged lands. These farms are estimated to support at least twenty full-time jobs and ten part-time positions.

Return on Investment: 10:1
Recreational Fishpond Management

Project Leader
Russell Wright

Extension Collaborators

Background
With approximately 250,000 small impoundments in Alabama, these mostly privately owned ponds represent some of the most important aquatic systems in the state. Ponds are used for many purposes, including drinking water, stormwater management, irrigation, water for firefighting, livestock water, aquaculture, aesthetics, and, the most common use, recreational fishing. Pond owners routinely struggle with many factors that impede their efforts to reach their goals in pond management. Impediments include aquatic weeds, fish kills, poor fish growth, structural failures such as leaks, and many others.

Educational activities, programs, and products were generated to inform pond owners, managers, and the general public about the ecology and management of small impoundments in Alabama and throughout the Southeast.

More than 20 specific events or public activities were conducted in 2023. Specialists and Natural Resources regional agents led pond management workshops. Non-Extension professionals who helped deliver these workshops included Alabama Department of Conservation and Natural Resources biologists, Natural Resources Conservation Service personnel, and private pond consultants. Other activities included sections of youth camps, field days, the Sun Belt Expo, and conventions where recreational fish pond management information was provided.

Specialists and agents provided over 1,000 individual consultations with pond owners and managers. Consultations included pond visits, telephone and email responses to problems, weed identification and control recommendations, and water testing for fertility assessments. Digital resources maintained in 2023 included Extension educational literature, lists of producers, and the Alabama Fisheries and Pond Management Facebook page.

Workshop and Event Participants
990

Audience Diversity for Participants
Providing Demographic Information
59 percent male, 41 percent female; 73 percent White, 25 percent Black, 2 percent other; 38 percent youth, 62 percent adult

Evaluation Technique and Result
No formal assessment was done in 2023. Direct consultation with pond owners had a significant impact, as indicated by follow-up conversations.
Angler Education

Project Leader
Russell Wright

Extension Collaborators
Bence Carter, David Cline, Norman Haley, Emily Nichols, and the Natural Resources 4-H Team

Background
Recreational angling is an activity shared by thousands of adults and youth across Alabama. We believe that angling is a healthy outdoor pastime that helps participants learn about and better appreciate our aquatic natural resources.

A 2020 estimate of the economic impact of recreational fishing in Alabama by the American Sportfishing Association indicated that anglers annually spend about $310 million, equating to a total economic impact of more than $463 million.

The 2022 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation documented that approximately 40 million anglers in the United States spent a combined 800 million days fishing and approximately $99 billion.

Events held in 2023 included a training activity (a component of Auburn University Fish Camp) for the staff of a county Extension office, and casting experiences at the Sunbelt Ag Expo in Moultrie, Georgia, and the Ag Roundup (College of Agriculture and Alabama Experiment Station event). Angler education has also been a central focus of many social media posts.

Estimated Workshop and Event Participants
450

Audience Diversity
Demographic data too limited to report
Aquatic Education: Promoting Awareness of Aquatic Resources, Management, and Responsible Education

Project Leader:
Emily Nichols

Extension Collaborators
County Extension Coordinators, 4-H Youth Development Coordinators, Regional Extension Agents, 4-H Agent Assistants, Graham Farm and Nature Center, and Alabama 4-H Center

Non-Extension Collaborators
Alabama Department of Conservation and Natural Resources (ADCNR) Wildlife and Freshwater Fisheries Division (WFF), Alabama Scenic River Trail, Association of Fish and Wildlife Agencies (AFWA), Auburn University School of Fisheries, Aquaculture, and Aquatic Sciences (SFAAS), Auburn University Department of Horticulture, Tennessee Valley Authority, Terrapin Creek Outfitters, Resource Conservation and Development Councils, Weeks Bay National Estuarine Research Reserve (NERR), and certified volunteers

Background
Alabama Extension and 4-H promote statewide awareness of aquatic resources, management, and responsible recreation through program offerings, capacity building, and outreach publications. This includes statewide coordination of Aquatic WILD in conjunction with AFWA; the Wildlife Habitat Education Program (WHEP) as part of the National WHEP; 4-H Aquaponics in collaboration with AU SFAAS and Horticulture; 4-H Sportfishing in collaboration with WFF; 4-H RiverKids in collaboration with ASRT; and the delivery of other aquatic-related educational lessons. These efforts build the capacity of adult informal and formal educators, volunteers, and industry professionals to engage a youth audience in hands-on learning. We get our stakeholders active outdoors and connected to water resources while developing essential life skills, and the public benefits from prevented drownings and water accidents because of safe recreation. We are also working to grow the next generation of anglers by helping to generate public support for our state’s aquatic resources through fishing license sales.
Number of Participants
41,645 youth and adults reached through in-person education and outreach, virtual training, activities, and events

Impact Estimates
- 35 bodies of water accessed for aquatic education and recreation statewide
- 4,628 involved in sportfishing; 78 percent increase in participation
- 54 youth from 29 counties involved in the Biggest Catch virtual fishing contest
- 587 involved in RiverKids paddling education; 35 percent increase in adult and 28 percent increase in youth participation
- 153 miles of Alabama freshwater paddled, a 37 percent increase from the previous year
- 17 educators certified in Aquatic WILD
- 15 trained in aquatic habitat management through WHEP
- 4 modules peer-reviewed for a new self-paced online aquaponics course
- Article “Meet Alabama’s Meat-Eating Pitcher Plants” (4HYD-2517) published
- 5 staff certified as angling/aquatic education instructors
- 8 staff certified as paddling education instructors and 4 volunteers certified as paddling assistants
- 17 continuing education certifications in CPR awarded
- 25 continuing education certifications in Wilderness and Remote First Aid awarded
- 10 continuing education certifications in Paddling Sports Safety awarded
- Grant awarded by TVA to increase public awareness of aquatic resources and participation in outdoor learning in Marion County

52 participants from 6 counties involved in the Alabama WHEP contest, with 26 youths identifying native aquatic species and drafting management plans for the coastal wetlands ecosystem

After participating in our aquatic education programs, most youth expressed an interest in natural resource-related careers, knew how to be a steward of the environment, and felt comfortable in and around water.

Audience Diversity
51 percent female, 49 percent male, 62 percent White, 24 percent Black, 13 percent Hispanic, 1 percent American Indian or Alaskan Native, 1 percent Asian, less than 1 percent Native Hawaiian or Pacific Islander, 6 percent more than one race

Return on Investment: 54:1
Watershed Management
(Also an Aquatic Natural Resources Project)

Project Leaders
Laura Bell Cooley, Eve Brantley, Mona Dominguez, and Sergio Ruiz-Córdova

Extension Collaborators

Background
The Watershed Management Project is designed to develop and demonstrate management practices to enhance the development and implementation of effective watershed education, monitoring, planning, and improvement (e.g., water quality, watershed education, and domestic well water). Project efforts include training in water and watershed management using demonstrations and stakeholder meetings at the watershed level, incorporating management practices into landowner education programs, providing drought education, and facilitating volunteer water monitoring workshops. Project outcomes include improved knowledge and adoption of watershed best management practices, improved documentation of drought conditions, and improved water quality, as observed by Alabama Water Watch volunteer water monitors.

The Watershed Management Project involved over 30 partnering organizations and agencies, reaching nearly 3,000 citizens. The project has a broad network of partners and attracts new audiences. In 2023, nearly 60 percent of participants in Watershed Management programming had not previously engaged with Alabama Extension.
Alabama Watershed Stewards: Taking a Watershed Approach

Project Leaders
Laura Bell Cooley, Eve Brantley, Mona Dominguez, and Sergio Ruiz-Córdova

Non-Extension Collaborators

Background
Alabama Watershed Stewards (AWS) is a statewide science-based educational program that promotes healthy watersheds, increases understanding of water pollution, and provides the knowledge and tools needed to prevent and resolve local water-quality problems.

The AWS program aims to increase citizen awareness and knowledge of the function of watersheds, their potential impairments, and local watershed protection strategies. The program provides technical trainings and practical information about local watersheds, opportunities to connect with local community groups, and engaging tools to encourage individuals to take leadership roles in improving their local water quality.

Evaluation Technique
Knowledge assessments provided in workshops and feedback surveys

2023 Summary
- Hosted seven separate topical technical training courses on green infrastructure design and planning
- Provided guidance to municipalities on watershed planning at three separate workshops
- Hosted two watershed stewardship workshops, which encouraged hands-on stewardship activities at a local level
- Developed educational resources for the Alabama Extension website (two Extension peer-reviewed articles, six media articles, and three Extension outreach articles)
- Hosted online course on Alabama Watershed Stewards, available to the public year-round (forty-nine students enrolled).
- Reached over 348 people through in-person events, 351 through newsletters, and 545 through social media
Alabama Private Well Program: Empowering the Citizens of Alabama

Project Leaders
Jessica Curl and Eve Brantley

Non-Extension Collaborators
Alabama Department of Public Health, Geological Survey of Alabama, Alabama Rural Water Authority, Auburn College of Science and Mathematics, UGA Extension

Background
The Alabama Private Well Program was established in 2020 and has since become a highly valued and referenced resource to Extension clients and staff across the state.

This program increases access to private well educational materials to empower, engage, and equip well users with the resources needed to protect their water systems. The program’s core values are to deliver meaningful information to homeowners with private wells, educate well owners on the importance of proper well stewardship, and serve as a resource for well owners and Extension personnel to obtain answers and information about small water systems.

Evaluation Technique
Direct consultation and evaluation survey

Number of Participants
156 individuals reached through workshops and direct consultations in 16 counties

Impact Estimates
- Hosted four signature well water workshops with complimentary bacteria testing in partnership with Dr. Camila Rodrigues; tested seventeen wells for the presence of bacteria
- Partnered with the Auburn University Department of Geosciences to host two coastal well owner workshops for well owners in Mobile and Baldwin Counties, Alabama; offered complimentary water testing to thirty participants
- Hosted seven educational webinars
- Hosted a Water Systems workshop in partnership with UGA Extension
- Produced one publication in partnership with Alabama Watershed Stewards

Post-Workshop Feedback
- A total of 72 percent of participants said they would test for bacterial contamination each year following the training, and 22 percent reported that they test annually.
- A 100 percent satisfaction rate was reported by attendees.
Alabama Water Watch: 
Community-Based, Science-Based Volunteer Water Monitoring of Alabama’s Water Resources

Project Leaders
Mona Dominguez, Sergio Ruiz-Córdova, Sydney Zinner, Carolina Ruiz, Rachel McGuire, and Eve Brantley

Non-Extension Collaborators
National Oceanic and Atmospheric Administration, U.S. Forest Service, Alabama Department of Environmental Management, Wild Alabama, Mississippi State University, University of Alabama at Birmingham, the Birmingham Zoo, Camp Meadowbrook, Huntsville Botanical Gardens, City of Foley Graham Creek Nature Preserve, City of Orange Beach Wind and Water Center, City of Auburn, City of Gadsden, City of Opelika, Jefferson County Stormwater, Mobile Baykeeper, Mobile Bay National Estuary Program, Legacy, and the F. Allen & Louise K. Turner Foundation

Background
Alabama Water Watch is a citizen volunteer water-quality monitoring program established in 1992 with the mission to improve water quality through citizen monitoring and action. AWW works toward its goal of fostering statewide water-quality monitoring by educating citizens on water issues in Alabama and the world, training citizens to use standardized equipment and techniques to gather credible water information using quality assurance protocols, and empowering citizens to make a positive impact by using their water-monitoring data for environmental education, water-body restoration and protection, and involvement in watershed stewardship.

Number of Participants
2,388 reached through online courses, in-person field sessions, webinars, and other outreach events

Evaluation Technique
Analysis of volunteer monitor data submitted to the AWW database and post-training survey

Impact Estimates
A total of 274 monitors submitted 4,368 water data records from 484 sampling sites on 223 water bodies in 144 different HUC 12 watersheds in 46 Alabama counties. Entities including agencies, nongovernmental organizations, municipalities, and universities, utilize AWW water data. Data collection of a similar magnitude by a state agency, such as the Alabama Department of Environmental Management, would cost over $869,052.

- A total of 864 participants completed online courses.
- AWW staff and volunteer trainers led sixty-six field sessions throughout Alabama with 579 attendees.
- A total of 664 water-monitoring certifications were awarded.
- A total of 20,913 volunteer hours valued at $665,033 were contributed through data collection and training participation.
- Monthly e-newsletters, social media posts, and twenty-nine blog articles highlighted upcoming events to 3,621 newsletter subscribers and 4,100 Facebook followers.
- A total of 150 educators received copies of America’s Amazon poster that they used to educate an estimated 40,000 adults and youth about Alabama’s water resources and aquatic biodiversity. Social media posts featuring the digital poster reached an additional 150,000+
- AWW staff presented at four state, regional, and national conferences.
- A total of 7,365 youth were involved through the 4-H Alabama Water Watch Program.
Post-Training Feedback

- A total of 99 percent of participants planned to conduct water monitoring.
- A total of 98 percent of participants intend to educate others about water quality.
- There was a 196 percent increase in interest in participation with a local watershed group.
- Nearly 100 percent of all participants reported that they were now knowledgeable to extremely knowledgeable about water resources in Alabama as well as common types and causes of water pollution.

“*I learned so much. It was a very informative and wonderful experience. I feel prepared to monitor and am inspired to educate and inform others.*”

Return on Investment: 49:1
Alabama Drought Reach Project

Project Leaders
Brianne Minton, Kent Stanford, and Eve Brantley

Background
Alabama Drought Reach, launched in 2023, is working to improve drought communications and drought agricultural impact monitoring in Alabama through a collaborative partnership between the Auburn University Water Resources Center, Alabama Extension, and the Office of the State Climatologist. The vision of the program is to better document agricultural impacts of drought in Alabama, resulting in a more informed scientific and agricultural community.

The objectives of ADR are to develop a systematic approach and monitoring program for drought agricultural impact data collection by Alabama Extension and Alabama Agricultural Experiment Station personnel; develop and conduct drought training for Alabama Extension and Alabama Agricultural Experiment Station personnel; work alongside the Office of the State Climatologist to provide timely and relevant agricultural impact data; and increase drought impact literacy among Alabama farmers, landowners, and the general public.

During this most recent drought that began in late July, Alabama Drought Reach played a pivotal role in communicating and monitoring drought conditions across the state. In terms of communication, ADR released a weekly crop condition graphic that summarized data from NASS reports, and a weekly drought update that communicated current drought conditions across the state in collaboration with U.S. Drought Monitor and the Alabama Office of the State Climatologist.

ADR was responsible for disseminating drought-related data to any Extension agent filing for USDA assistance for their farmers. This data included drought conditions, precipitation, temperature, stream flow, and soil moisture. The program also offered a unique opportunity for Alabama Extension to directly communicate with the State Climate Office by providing a platform to request climate data. Alabama Drought Reach is the first program of its kind in the Southeast and will continue to better prepare the agricultural community for future drought events.

In 2024, Alabama Drought Reach is training Extension personnel to use a new drought reporting survey that will help the State Climate Office provide more accurate drought information to the federal U.S. Drought Monitor map.
**2023 Summary**

- ADR produced features for publication with Alabama Extension, University of Alabama in Huntsville, and the Huntsville Business Journal.

- Media interviews were conducted with WAAY 31 and Fox 54.

- A total of twenty-seven drought reports and twenty-three crop impact reports were published, and six articles were developed for the Alabama Extension website.

- ADR made three field visits with Alabama Extension personnel and six presentations at professional meetings.

- ADR supported thirty-six counties by providing drought-related data for livestock and crop loss claims.

---

**Statewide Condition Summary**

**What’s Changed?** D3 (Extreme Drought) was removed from Baldwin and Washington Counties. Remaining drought conditions persisted from the previous week.

**What’s New?** South AL received beneficial rainfall, keeping drought conditions from worsening and even relieving extreme conditions in Southwest Counties. The small amounts of rainfall across the state allowed more producers to plant winter wheat. Pastures continue to suffer from prolonged drought, however, and many producers are still feeding cattle supplemental hay.

**What’s Next?** Predicted rainfall could continue to bring needed relief to South AL. There could be some improvement from rain but there is not much in the forecast.

---

**Statewide Coverage by Category**

<table>
<thead>
<tr>
<th>Category</th>
<th>Coverage This Week</th>
<th>Changes Since Last Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>D0: Abnormally Dry</td>
<td>0.9%</td>
<td>0.1%</td>
</tr>
<tr>
<td>D1: Moderate Drought</td>
<td>15.7%</td>
<td>2.7%</td>
</tr>
<tr>
<td>D2: Severe Drought</td>
<td>40.7%</td>
<td>11.2%</td>
</tr>
<tr>
<td>D3: Extreme Drought</td>
<td>37.5%</td>
<td>7.3%</td>
</tr>
<tr>
<td>D4: Exceptional Drought</td>
<td>4.8%</td>
<td>1.2%</td>
</tr>
</tbody>
</table>
For more information, contact your county Extension office. Visit www.aces.edu/directory.

Trade and brand names used in this publication are given for information purposes only. No guarantee, endorsement, or discrimination among comparable products is intended or implied by the Alabama Cooperative Extension System.

In accordance with Federal law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, this institution is prohibited from discriminating because of race, color, national origin, sex (including gender identity and sexual orientation), age, disability, and reprisal or retaliation for prior civil rights activity. Program information may be made available in languages other than English. Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, and American Sign Language) should contact the Alabama Cooperative Extension System Human Resources Department at (334) 844-5531 or the State of Alabama Governor’s Office on Disability (GOOD) at (888) 879-3582 or USDA’s TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. To file a program discrimination complaint, a complainant should complete a Form AD3027, USDA Program Discrimination Complaint Form, which can be obtained online at https://www.usda.gov/oascr/how-to-file-a-program-discrimination-complaint, from any USDA office, by calling (866) 632-9992, or by writing a letter addressed to USDA. The letter must contain the complainant’s name, address, telephone number, and a written description of the alleged discriminatory action in sufficient detail to inform the Assistant Secretary for Civil Rights (ASCR) about the nature and date of an alleged civil rights violation. The completed AD-3027 form or letter must be submitted to USDA by mail: U.S. Department of Agriculture Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; Fax: (833) 256-1665 or (202) 690-7442; or Email: program.intake@usda.gov.

New May 2024, ANR-3066
© 2024 by the Alabama Cooperative Extension System. All rights reserved.

www.aces.edu