



## Department of Agriculture

**Bryan P. Hurlburt**, *Commissioner*

**Established:** 1925

**Statutory Authority:** CGS. Sec. 22.1

**Central Office:** 450 Columbus Boulevard, Hartford, CT 06103

**Number of Employees:** 52

**Recurring operating expenses:** \$14,269,955

**Organizational Structure:** Office of the Commissioner, Bureau of Agricultural Development and Resource Conservation, Bureau of Aquaculture, Bureau of Regulatory Services, with Business Office and Human Resource support from the Department of Administrative Services, and legal services provided by the Office of the Attorney General.

### Mission

The Department of Agriculture's mission is to foster a healthy economic, environmental, and social climate for agriculture by developing, promoting, and regulating agricultural businesses; protecting agricultural and aquacultural resources; enforcing laws pertaining to public health, animal health and animal care; and promoting an understanding among the state's citizens of the diversity of Connecticut's agriculture, its cultural heritage, and its contribution to the state's economy.

### Statutory Authority

Statutory authority for the Department of Agriculture is found in Sections 12, 22, 26 and other sections of the Connecticut General Statutes.

### Public Service

The Department of Agriculture provides public benefits by empowering its three bureaus to promote and protect Connecticut Agriculture. Through the agency's Bureau of Regulatory Services, inspectors ensure domestic animals' health and wellbeing, the safety of produce and dairy products, and that local agricultural businesses are properly trained to meet food safety requirements. The Bureau of Agricultural Development and Resource Conservation provides direct assistance and programs to farm operations entering, diversifying, or expanding their agricultural businesses. It makes direct positive impacts on communities through the Farmland Preservation Program, the Senior and WIC Farmers Market Nutrition Program, Farm to Chef, and Farm to School programs. The Bureau of Aquaculture oversees marine and inland aquaculture production activities, administers the state Shellfish Sanitation Program, and operates the laboratory in Milford, leasing and restoration of shellfish beds, and licensing of persons engaged in commercial harvesting of shellfish.

The Connecticut Department of Agriculture continues to inform the public with direct engagement of media representatives; and local, state, and federal government officials about various aspects of

Connecticut agriculture through its Connecticut Weekly Agricultural Report, news releases, social media, small group or one-on-one meetings, and radio and television appearances.

## **Legislative Changes**

During the 2023 legislative session, the Department proposed and successfully passed three public acts to support the work the agency is doing to support animal welfare, climate change, and agricultural development.

Public Act 23-184 made several changes related to agricultural development and the department's aquaculture operations. It revised the Farmland Restoration Grant, eliminating the twenty-thousand-dollar cap in place for grants for developing, implementing, and complying with a farm resources management plan or a farmland restoration and climate resiliency plan, allows the state grant to cover up to 90% of costs, and removes the consideration of federal grants to that cap. It revises and renames the Farm Viability Grant to the Agricultural Enhancement Grant, which should open in spring 2024, allows for the subdivision of future PDR properties, and restructures the Apple Marketing Advisory Board to carry out the state laws on apple market orders. Public Act 23-184 also creates a small-scale aquaculture pilot program, which will allow the Commissioner of Agriculture to designate shellfish grounds available for annual leasing to small-scale aquaculture operations.

Public Act 23-187 revises the state's livestock statutes to reflect language changes over time from the United State's Department of Agriculture (USDA). It updates compensation and quarantine requirements for condemned livestock and public health responsibilities regarding reportable diseases.

Public Act 23-17 made changes to domestic animal statutes, including allowing animal control officers (ACO) to seek a court order to require the animals owner to provide necessary care for an animal, in addition to other court orders the ACO may request by law, renaming a kennel license to a "local kennel license" and updating the number of litters requiring such license from two to five litters annually. It allows pet shops to now maintain either written or electronic records of veterinary services provided to cats and dogs, requires that certificates of veterinary inspection (CVI's) be issued by veterinarians who are accredited by USDA, and disqualifies anyone who has been found guilty of animal cruelty from holding certain licenses.

In addition to agency proposals, there were revisions related to the sale of hemp products within cannabis dispensaries, interactions with wildlife including black bears, and a new law allowing farm winery permittees to sell their product at up to three retail outlets under certain conditions.

The state budget clarified existing allocations to farm manure management projects, allocated \$1 million to the CT Grown for CT Kids Grant Program, \$100k to oyster cultch restoration, and \$2 million to the department for shipping container gardens.

DoAg continues to work with partner organizations, other state agencies, and the industry to navigate the challenges presented by climate change and to support the resilience of the industry.

## **BUREAU OF AGRICULTURAL DEVELOPMENT AND RESOURCE CONSERVATION**

The Bureau of Agricultural Development and Resource Conservation is comprised of three units: the Agricultural Development Unit, the Climate Smart Ag Unit, and the Farmland Preservation Unit. . The bureau offers programs and services that assist farms with entering, diversifying, and expanding their agricultural businesses, incorporating climate smart agricultural practices, supporting the responsible dual-use of agrivoltaics and administers the Farmland Preservation Program, among many others.

### **AGRICULTURAL DEVELOPMENT UNIT**

In addition to many other functions, the Agricultural Development Unit conducts marketing and outreach to both farmers and consumers. It provides business development services in cooperation with state, federal, and private partners for both direct-to-consumer and wholesale market opportunities through a diverse portfolio of 25 different programs and services.

#### State & Federal Grant Opportunities

- Successfully transitioned the Farmers Market Nutrition Program and the Senior Farmers Market Nutrition Program to an electronic delivery platform to allow for use of a mobile application and electronic benefit cards for participants.
- Assisted coordination and promotion of 115 independently operated certified Connecticut Grown farmers’ markets, farm stands and mobile markets featuring 247 certified farmers.
- Administered Connecticut’s Farmers’ Market Nutrition Programs (FMNPs) to provide benefits for the purchase of Connecticut Grown fruits and vegetables at authorized farmers’ markets to 46,164 nutritionally at-risk women, infants, and children and 31,027 low-income seniors.
- Implemented a Farmer Rancher Stress Assistance Grant in the amount of \$302,438.09 from the USDA-NIFA to:
  - Offer 205 seats in the Agrisafe Network Farm Response Training to healthcare professionals to better understand and serve the farming industry.
  - Develop and release the AgriStress Helpline to Connecticut. A 24/7 call and text helpline offering crisis response and resources to Connecticut farmers in need of mental health services.

<b>AgriStress Crisisline CT Call Data 2023</b>	January	February	March	April	May	June	July	August	September	October	November	December	<b>YTD</b>
Total AgriStress CT Calls Queued	0	0	1	0	1	3	12	5					<b>22</b>
Total AgriStress CT Calls Answered	0	0	1	0	1	3	11	4					<b>20</b>
Total Calls Abandon on AgriStress from CT *calls that abandon after 30 seconds	0	0	0	0	0	0	1	1					<b>2</b>
Total Follow-Up Calls for CT AgriStress CRs	0	0	0	0	0	0	1	0					<b>1</b>
Total Call Time Logged (in minutes)	0	0	4	0	7	244	60	28					<b>343</b>
Average Call Talk Time (in minutes)	0	0	4	0	7	81.3	5.45	7					<b>13.10</b>
Average Crisis/Emotional Support Call Talk Time (in minutes)	0	0	0	0	0	119	0	15					<b>16.6875</b>
Average Speed of Answer (in seconds)	0	0	58.43	0	16.5	11.4	29.93	30.44					<b>18.34</b>
Total AgriStress Call Reports	0	0	1	0	1	3	11	4					<b>20</b>
Total AgriStress Text Visitors	0	0	0	0	1	0	0	0					<b>1</b>
<b>TOTAL Contacts Handled</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>11</b>	<b>4</b>					<b>21</b>

- Worked with a marketing firm to develop CTFarmStressRelief.com, a website for the ag industry to locate mental health resources and a digital toolkit for industry partners.

**Ag Stress Relief Tools**  
Mental Health Resources for CT Farmers and Farm Families

<b>Get Help Now!</b>	↓
<b>Non-Emergency Resources</b>	↓
<b>Videos &amp; Webinars</b>	↓
<b>Provider Resources</b>	↓
<b>Digital Toolkit</b>	↓

**AgriStress Helpline for Connecticut**  
Crisis Support for Agricultural Communities

- Contract with UCONN Extension to:
  - offer three wellness webinars to Connecticut producers
  - continue the farmer wellness circle, a peer networking and support group
  - develop two resource videos, and
  - Bring the Land for Good Farm Succession School to Connecticut to assist with managing stress involved with farm succession.
  - Offer the Agrisafe Cultivating a Healthy Mind training to 4-H, FFA, and other youth organizations to help youth in agriculture recognize stress and offer coping mechanisms.
- Successfully applied for and received \$436,671.91 from the United States Department of Agriculture’s Specialty Crop Block Grant program to fund five (5) projects to enhance the competitiveness of Connecticut specialty crops.
- Provided \$22,662.50 in federal funds to 49 certified organic producers, processors, or both as reimbursement for 50% of total organic certification costs, not to exceed \$500 per certification scope (crops, wild crops, livestock, and processing/handling).
- Awarded \$6,935,000 in state funded Climate Smart Agriculture & Forestry Grants to two (2) Connecticut farms, seven (7) non-profits, one (1) university, one (1) tribal nation, and one (1) growers association. Funding priorities for eligible climate smart practices were centered around the following focus areas:
  - Providing technical assistance
  - Distributing grant funding to producers
  - Coordinating training programs
  - Coordinating projects that pilot or demonstrate water and land-based conservation practices
  - Creating tools that help reduce barriers to accessing assistance for water or land-based conservation practices on farms
  - Establishing equipment-sharing programs
  - Activities that will increase the number of farmers who are implementing climate smart farming practices
- Awarded \$514,000 in matching Farm Transition Grants to thirty-two (32) Connecticut farms and one (1) agricultural cooperative for projects costing over \$1.1 million using Community Investment Act funds. Farmers and agricultural cooperatives were encouraged to apply to one of four available categories:

- New Farmer Microgrants for farmers within the first one to three years of entering the agricultural industry, who are looking to expand production and operation with infrastructure purchases.
- Infrastructure Investment Grant: for farmers with at least three full years of production history looking to purchase equipment, tractor attachments, irrigation, tools, etc., or improve their existing facilities to accommodate increased production and operations.
- Research and Development Grant: for farmers interested in testing market response to developing new CT Grown products, determining consumer preferences, and testing recipes for new value-added products.
- Innovation and Diversification Grant: for farmers looking to diversify their current offerings to produce new products, utilize innovative technologies to improve efficiency, scale of production, and sustainability of agricultural practices.
- Funded \$330,000 in matching Farm Viability Grants to two (2) municipalities, eight (8) non-profits, and one (1) regional Conservation District to support projects with a total cost of \$649,023 using Community Investment Act funds. Funding priorities were centered around the following questions of focus:
  - Encouraging diversity, equity, and inclusion in CT agriculture
  - Increasing opportunities and resources for urban agriculture
  - Supporting the regional and local food supply chain
  - Improving farmland accessibility
- Awarded \$452,169 in CT Grown for CT Kids Grants to (32) K-12 schools, early childhood centers, and farmers to support projects to build or expand Farm to School activities using American Rescue Plan Act Funding. Applicants applied to one of the four available categories:
  - Track 1: Connecticut Farm to School (K-12) Local Procurement Grant
  - Track 2: Connecticut Farm to School (K-12) Experiential Learning Grant
  - Track 3: Connecticut Producer Capacity Building Grant
  - Track 4: Connecticut Farm to Early Care and Education (ECE) Grant

#### Export Assistance & Wholesale Collaboration

- Partnered with Food Export Northeast to increase Connecticut value added food and agricultural exports to domestic and international markets. In FY 2023, seven Connecticut companies took part in 32 events and/or trainings to increase their exporting opportunities.
- In FY 2023, seven Connecticut opportunities participated in the Branded Program, a cost-share reimbursement program made available through the DoAg/Food Export partnership to offset costs associated with exporting Connecticut produced goods.
- Offered training for producers and wholesale buyers within the domestic and international food industry through in-person events and a library of webinars on export education
- Provided sales opportunities with Food Export Northeast through coordination of one-on-one meetings with buyers, wholesale distributors, and brokers.
- In FY 2023, through a partnership with Food Export Northeast, Connecticut suppliers had the opportunity to showcase their products to international buyers through over 40 trade shows, buyers' missions, and focused trade missions, domestically and internationally. During these events, buyer/producer networking opportunities, one-on-one meetings between producers and buyers, and translation services for exhibitors were provided.

### “Farm-to-” Programs

- Continued the state’s Farm-to-Chef Program to connect Connecticut farms with foodservice professionals and markets. Through radio ads, email blasts, and Facebook interaction, the Farm-to-Chef program has highlighted connections between producers and culinary professionals.
- Six restaurants, and two schools participated to create a special menu during Farm to Chef Week to highlight Connecticut Grown farm products.
- A kickoff event was held at Reservoir Community Farm, home to Green Village Initiative in Bridgeport, CT. The event featured two cooking demonstrations from local chefs of color Chef Pierre and Chef Raquel of A Pinch of Salt along with a speaking portion and the farmer’s market. The event shared details of Farm-to Chef Week and promoted the participating venues Farm-to-Chef Week 2022 as well as general consumer awareness of the CT Grown program.
- Continued DoAg’s leadership position in the CT Farm to School Collaborative, a statewide networking group for Farm to School activities by serving on the steering committee.
- Organized partners (Put Local on Your Tray, FoodCorps CT, CT State Department of Education and others) to create materials and events for 2022 CT Grown for CT Kids Week, October 3-7, 2022.
- Helped develop and promote a menu of activities for schools to engage with farm to school programming throughout the year. Helped to develop social media and outreach toolkits for distribution to schools.
- Implemented \$82,000 in funding through the USDA Farm to School grant program in collaboration with UConn Extension, Connecticut Department of Education, and FoodCorps CT. The funding will enable us to conduct research on current CT Grown purchasing amounts in schools, lead in depth procurement-based work with four school districts, and to create equity focused educational promotion campaigns.
- Selected through a competitive RFP process, UConn Zwick Center to complete research on current purchasing levels and challenges with CT School Food Directors utilizing CT Grown farm products.
- Attended the USDA National Farm to School Conference for state agencies hosted by the Northeast Regional Office.

### COVID Response & Emergency Feeding

- The Department of Agriculture in April of 2022 entered into a cooperative agreement with USDA Agriculture Marketing Service (AMS) for the Local Food Purchase Cooperative Agreement Program (LFPA). The award for Connecticut is \$3,010,276.00. The agreement is from April 2022 to October 2024. The purpose of the program is to maintain and improve food and agricultural supply chain resiliency through supporting local and socially disadvantaged producers through building and expanding economic opportunity, and establishing and broadening partnerships with producers, the food distribution community, and local food networks to ensure the distribution of fresh and nutritious foods in rural, remote, or underserved communities.
- Funded eight entities through the Local Food Purchase Cooperative Agreement Program for a total of \$2,720,000. This is federal American Rescue Plan Act funding for the purpose of purchasing and distributing locally grown products (at least 80% CT Grown) to food insecure individuals. Recipients were CT Foodshare, CLICK Willimantic, Forge City Works, City of Bridgeport, Vertical Church, Brass City Harvest, NWCT Food hub, New London Community Meal Center.
- DoAg received additional funding through LFPA+ program, funded through the Commodity Credit Corps and distributed funds to the existing eight grantees, totaling \$3,714,854 additional funds for local food purchasing.

## Agency Marketing & Outreach

- Industry Outreach Events: The bureau frequently engages in a number of industry related events to engage with the industry and make them aware of the programs and services provided through the Ag Development Unit and agency as a whole. These events in FY 2023 included:
  - Plant Science Day (August 2022)
  - School Nutrition Association of CT Annual Conference (October 2022)
  - CT Farm Bureau County Annual Meetings (various October – November 2022)
  - Working Lands Alliance Annual Meeting (November 2022)
  - Association of CT Ag Fairs Annual Meeting (November 2022)
  - CT Farm Bureau Ag Expo (November 2022)
  - CT Pomological Society Annual Meeting (November 2022)
  - New England Vegetable and Fruit Conference & Trade Show (December 2022)
  - Farm Viability Grant Virtual Writing Workshop (December 2022)
  - CT Small Fruit & Vegetable Conference (January 2023)
  - CT Greenhouse Growers Winter Meeting (January 2023)
  - Build Your Network, Grow Our Future Meeting (January 2023)
  - Farm Transition Grant Virtual Writing Workshop (February 2023)
  - CT NOFA Conference (March 2023)
  - Ag Day at the Capitol (March 2023)
  - CT Christmas Tree Grower Twilight Meeting (June 2023)
  - CT Pomological Society Twilight Meeting (June 2023)
- Agency Website: The importance of an updated, relevant website as the agency's information source to the industry and consumers is critical. In FY2023 the following occurred to ensure this effort was adequately maintained:
  - Expanded the number of content and system administrators to improve website maintenance and relevancy.
  - Continue to work with Tyler (replaced NIC) to apply redirects for pages to reduce the issue of broken links
  - Removed outdated pages and update content as needed
  - Utilized the detach/attach function for media files to prevent broken links.
  - Worked with Tyler to create new bureau pages that have defined breadcrumb paths for better navigation within a bureau-specific section.
  - Inserted iFrames to mirror time-sensitive pages from outside of the agency.
  - Continued to utilize the website to improve customer service; develop and expand agricultural markets; preserve Connecticut farmland and expand the use of working lands; protect populations from getting or spreading agricultural diseases; and protect and inspect animal health and well-being.
  - Reorganized how the backend is filed for press releases, Boards, and units to more easily navigate the website
- Other Agency Supported Websites: To support Connecticut agriculture and make the availability of Connecticut Grown farm products known, the agency also:
  - Renewed the user-friendly website redirect of [www.CTGrown.gov](http://www.CTGrown.gov);
  - Maintained additional consumer-friendly website alias including: [www.PassporttoCTFarmWine.com](http://www.PassporttoCTFarmWine.com); [www.GrowCTFarms.com](http://www.GrowCTFarms.com);
  - Maintained standalone websites including: [CTDairy.org](http://CTDairy.org); [ConnecticutGrownStore.com](http://ConnecticutGrownStore.com); [CTApples.org](http://CTApples.org)
  - [ConnecticutGrownStore.com](http://ConnecticutGrownStore.com): Operated an online marketplace for Connecticut Grown merchandise and apparel, earning a gross sales revenue of \$13,193.90 in merchandise,

helping to strengthen the Connecticut Grown brand, including updating inventory to include items with new CT Grown brand logo and messaging.

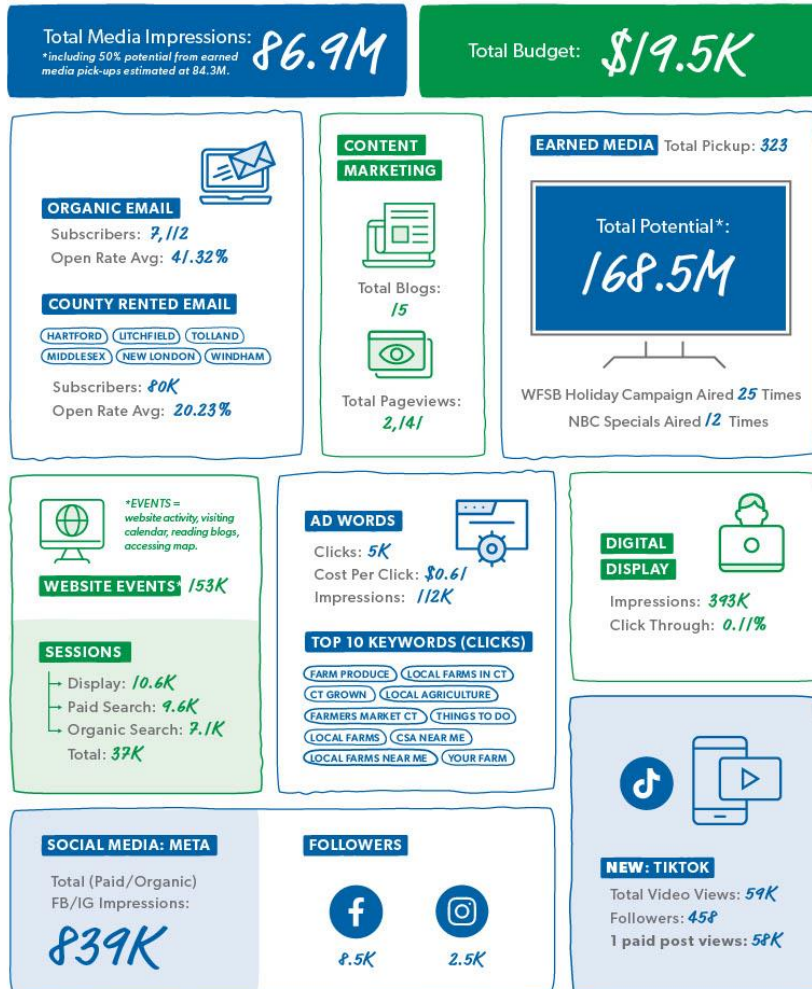
- Maintained [ctfoodpolicy.com](http://ctfoodpolicy.com) to provide a platform for resources and education around the council and its work.
- Maintained a standalone consumer-facing website, [CTGrown.org](http://CTGrown.org), as part of the rebranded CT Grown campaign and continued integration of [CTWineCountry.com](http://CTWineCountry.com) as consumer-facing website for farm wineries.
- Boards Councils and Commissions: The bureau works with four statutorily authorized boards and councils to have industry representations to the agency and to advance the industries of focus. These include:
  - Farm Wine Development Council: Provided staffing/administrative support to the Connecticut Farm Wine Development Council to deliver more than \$44,540 in programming for industry members and consumers, including renewal of electronic mobile application for wine passport program, multimedia marketing campaign and procurement of passport prizes for the passport program to promote Connecticut's farm wineries. The multimedia marketing campaign which ended December 2022 had more than 1.291 million impressions, distributed 8 consumer emails, conducted 5 photo/video shoots and reinvented the presence at the Big E for CT Farm Wineries. Nine wineries participated in the CT Building at Big E with more than 7,900 glasses of wine sold.
  - Connecticut Milk Promotion Board: Provided staffing/administrative support to the Connecticut Milk Promotion Board to deliver more than \$488,471.35 in programming and marketing, including farm-to-school grants; partnerships between health professionals and nutrition educators; farmer engagement grants; crisis training for dairy farmers; social media ambassadors training; sponsorship of Connecticut Dairy Day at the Hartford Yard Goats and provide milk samples from local farmers at the event; support farmer engagement for on farm events and provide promotional items with the CT Dairy branding; provide tools to dairy farmers to engage consumers on social media; and connect with consumers at the Big E
  - Connecticut Food Policy Council: Provided staffing/ administrative support to the CT Food Policy Council, bringing together council members representing state agencies, agricultural organizations, anti-hunger organizations appointees from the general assembly, and members of the general public. The council convened to discuss food policy and practices, available resources, current initiatives, and information sharing. Awarded \$79,812.88 in state-funded Food System Capacity Building Grants to eight awardees to complete projects that
    - Increase the use of, awareness of, and access to healthy food.
    - Support stakeholders in collaborative work to address local food system issues.
    - Support the creation or continuation of local food policy councils, anti-hunger coalitions, and similar working groups or networks focused on food systems, food access, and/or community food security.
    - Support projects that include community-driven solutions to create a more just food system that empowers communities to grow, process, prepare, sell, and eat culturally preferred healthy food
  - Connecticut Apple Marketing Board: Provided staffing/ administrative support to the Connecticut Apple Marketing Board, promoting Connecticut Apple Producers through marketing efforts. These efforts included: Maintaining [www.CTApples.org](http://www.CTApples.org), the CTApples App, CTApples Facebook page, Instagram page, and Pinterest page.
- Continued to facilitate the agency's Diversity, Equity, and Inclusion Working Group with monthly meetings focused on Access to Secure Land Tenure, Access to Resources, Infrastructure, and



Business Planning, Access to Education and Training, and Market Access and Diversification. The recommendations were completed by the working groups in December 2023 and passed onto the main working group to draft the report for release in early 2023. More info on the DEI working group and the final report can be found on the agency webpage, <https://portal.ct.gov/DOAG/Boards/Boards/Diversity-Equity-and-Inclusion-Working-Group>.

- Consumer Outreach Events: The bureau frequently engages in consumer facing events to promote the availability and accessibility of CT Grown farms and farm products. Events included:
  - Woodstock Fair (September 2022)
  - CT Building at Big E (September 2022)
  - CT Flower & Garden Show (February 2023)
  - Ag Day at the Capitol (March 2023)
- Consumer-Focused Marketing Efforts:

**CTGROWN** KPI Marketing & Communications: *8.1.22 - 12.31.22*



CTGROWN In The News: 8.1.22 - 12.31.22

The screenshot shows a Yahoo Finance article. At the top, the Yahoo Finance logo and search bar are visible. The article title is "Connecticut Department of Agriculture Offers Five Ways for Residents and Visitors to Pick CT Grown for the Holidays". Below the title, there is a sub-headline: "Connecticut's agricultural scene remains active with cut-your-own Christmas trees, winter farmers' markets, gift options, and more". The article text begins with "HARTFORD, Conn., Nov. 17, 2022 /PRNewswire/ -- As the holiday season approaches, the Connecticut Department of Agriculture is encouraging residents and visitors to support their local farmers and producers, and is offering five ways to make CT Grown part of their celebrations." A large "CONNECTICUT GROWN" logo is prominently displayed in the lower half of the article. To the right, there is a "DFW" logo and a "DINE WITHOUT THE LINES" graphic. A "TRENDING" section is visible at the bottom of the article.

The screenshot shows a Morningstar PR Newswire article. At the top, the Morningstar logo and navigation menu (Sustainable Investing, Funds, ETFs, Stocks, Bonds) are visible. Below the navigation, there is a banner for "INVESTABLE FOOD INVESTABLE WORLD" with a "Learn More" button. The article title is "Connecticut Department of Agriculture Offers Five Ways for Residents and Visitors to Pick CT Grown for the Holidays". Below the title, it says "Provided by PR Newswire" and "Nov 17, 2022 10:00 AM EST". The article text begins with "Connecticut Department of Agriculture Offers Five Ways for Residents and Visitors to Pick CT Grown for the Holidays" and "Connecticut Department of Agriculture Offers Five Ways for Residents and Visitors to Pick CT Grown for the Holidays". The article text continues with "PR Newswire" and "HARTFORD, Conn., Nov. 17, 2022". The article text concludes with "Connecticut's agricultural scene remains active with cut-your-own Christmas trees, winter farmers' markets, gift options, and more" and "HARTFORD, Conn., Nov. 17, 2022 /PRNewswire/ -- As the holiday season approaches, the Connecticut Department of Agriculture is encouraging residents and visitors to support their local farmers and producers, and is".

## RESOURCE CONSERVATION UNIT

Agriculture is one of Connecticut's most vital economic sectors, and at its heart is the state's extraordinary prime and important farmland. The Department of Agriculture preserves working farmlands by acquiring development rights to agricultural properties through its Farmland Preservation Program, ensuring that the land remains available only for agricultural use in perpetuity. In addition to the Farmland Preservation Program, the Resource Conservation Unit is also involved with:

- Community Farms Preservation Program
- Stewardship of Perpetual Agricultural Easements
- Connecticut FarmLink Program
- Farmland Restoration Grant Program
- Agricultural Permits on State-Owned Farmlands
- Review of PV Solar Development on Farmlands
- Connecticut Soil & Water Conservation Council
- Inter-Agency Drought Advisory Group

The main objective of the Farmland Preservation Program is to maintain a farmland resource base, consisting mainly of prime and important farmland soils that will ensure local availability of fresh farm products and help agriculture remain as an important part of the state's economy.

As of June 30, 2023, the program has preserved 48,462 acres on 414 farms since 1980. The long-term goal is to preserve 130,000 acres, with at least 85,000 of prime, statewide, or locally-important farmland soils.

- Acquired the permanent development rights on 11 farms totaling 851 acres at a total cost of \$3,769,406, while leveraging \$1.3 million in federal USDA Agricultural Land Easement funds and \$104,000 in local cost-sharing (38% cost share), bringing the Farmland Preservation Program's total to 414 protected farms covering 48,462 acres.
- Managed and made restoration improvements for 10 agricultural use permits on state-owned farmland which include dairy, hay, diversified vegetables, and small fruit production.
- Entered into 23 new purchase-of-development rights (PDR) offer agreements to preserve approximately 1,490 acres, encumbering \$8.4 million.
- Advanced an additional 32 other PDR projects, totaling approximately 2560 acres at an estimated \$11.6 million in preservation costs.
- Successfully secured \$1.5 million in additional federal fiscal year 2023 USDA NRCS obligated funds with Agricultural Lands Easement (ALE) Agreements for 5 PDR projects protecting 300 acres
- Continued advancing partnerships with 8 municipalities, on a total of 24 ongoing joint farmland preservation projects. These partnerships occur throughout the state in rural, suburban and urbanized areas, including Bolton, Ellington, Enfield, Lebanon, Salisbury, South Windsor, Suffield, and Woodstock.
- Also collaborated with multiple land conservation trusts on ongoing farmland preservation project partnerships, including the Bolton Land Trust, Cheshire Land Trust, Connecticut Farmland Trust, Northwest Connecticut Land Conservancy (formerly Weantinoge Heritage Land Trust), Southbury Land Trust, and Warren Land Trust.
- Increased PDR farm stewardship, conducting onsite and remote monitoring and reporting for all PDR farmland properties prior to the end of the calendar year.
- Assisted municipalities in applying for and receiving locally important soils designation from the USDA Natural Resources Conservation Service (NRCS), which enables farms in their respective towns become eligible for the Community Farms Preservation Program and for USDA NRCS

Agricultural Lands Easement funding. The total number of municipalities with USDA locally-important soils is now up to 96, representing more than half of the state's 169 towns.

- Provided over \$292,833 in matching grant funding through the Farmland Restoration Grant to 21 farm businesses to bring more than 190 acres back into active agricultural production, for a total of 362 awarded projects restoring an estimated 3,270 acres restored since the program's 2012 inception.
- Continued improving and enhancing the Connecticut Farmlink website, which averages more than 1,900 visits per month and 3,000 page views per month, helping connect new and beginning farmers to owners with available farmland. Hosted two virtual "Farmlink Mixers" facilitating contact and relationships between farmland owners and farmland seekers. Continued providing technical assistance on evaluating suitability of farmland property, lease or sale agreements, and farmland succession planning. Continued to update and provide an extensive list of resources on the CTFarmlink.org web page. There were 36 farmland profiles created or updated (78 total on the site). There are currently over 480 farm seeker profiles on the web site.



A clearinghouse for the transition between generations of landowners with the goal of keeping farmland in production. There is a new generation of farmers who want to be tomorrow's stewards of the land today, but they need land to work.

## **BUREAU OF REGULATORY SERVICES**

The Bureau of Regulatory Services is responsible for enforcing state laws and regulations and certain federal laws in fulfilling the Department's mission relative to protecting public health and safety; ensuring the safety of both plant and animal derived food products; ensuring the general health and welfare of all domestic animals including livestock and poultry; and managing emergency preparedness and response activities for animal disease outbreaks and natural disasters.

The Bureau is organized into five operational units: (1) Food Safety and Agricultural Commodities; (2) Dairy/Milk Safety; (3) Office of the State Veterinarian and Animal Health; (4) State Animal Control; and (5) Licensing and Animal Population Control Program. Although each unit has separate and distinct responsibilities, certain situations and conditions necessitate collaboration and cooperation between staff of the various units.

The Bureau continues to secure non-state funding to enhance and support programmatic activities. The Bureau has multi-year cooperative agreements with the United States Food and Drug Administration (FDA) to implement state programs to enforce (1) the Produce Safety Rule of the Food Safety and Modernization Act (FSMA) and (2) the FDA's Animal Feed Regulatory Program Standards (AFRPS). The Bureau continued its yearly cooperative agreements with the USDA's Animal Plant and Health Inspection Service, Veterinary Services (APHIS, VS) fund activities (1) relative to reportable poultry and livestock disease surveillance and (2) animal disease traceability.

## **HEMP PROGRAM**

Since the enactment of Public Act No. 19-3, An Act Concerning A Pilot Program for Hemp Production, the Department has experienced continued participation from the hemp agricultural community within the state. In its administration of the Program, the Bureau conducts a thorough review of each producer license application for compliance with requirements prior to the issuance of a license; on-site inspections; sampling for submission for laboratory analysis; and laboratory test result review to ensure that THC levels are within allowable limits.

### **FY 2023 Participation**

- 56 active hemp producers
- 58,313 acres and 205,768 square feet registered to grow hemp

On March 22, 2021, USDA issued their Final Rules for hemp production, which necessitated additional revisions to Sec. 22-611 of the Connecticut General Statutes. During the 2021 legislative session, revisions were made to allow remediation of noncompliant crops done in accordance with federal law as an alternative to disposal, specifications on federal controlled substance felonies and licensure criteria, and the addition of the requirement for hemp producer licensees to submit their employee identification number (EIN) or social security number to the state Department of Agriculture. These revisions were supported unanimously in the legislature and incorporated into the state's program.

## **DAIRY UNIT**

- Collected and analyzed 1000 samples of processed/manufactured milk, milk products and cheese, 200 samples of raw milk for pasteurization and 180 samples of retail raw milk to ensure compliance with state and federal milk safety regulations and detect the presence of animal drug residues. The retail raw milk samples are also tested for the presence of human pathogens. Staff collected 90 water samples for testing from dairy production and processing facilities and 18 milk samples for vitamin analysis.

- Conducted 150 routine Grade A Dairy Farm inspections, 45 Retail Raw Milk Farm inspections, 85 routine Milk/ Cheese Plant inspections, 85 Pasteurizer Equipment tests, 30 Bulk Milk Tanker inspections, evaluated 20 milk plant samplers, evaluated 40 milk hauler samplers, conducted 130 Special inspections of dairy producers and manufacturers (inspection or quality violation follow-up), 8 Milk Plant listing audits, 7 Farm bulk tank unit (BTU) audits.
- Orders/Warnings issued: Twelve ( 10) stop sale orders to milk producers and milk processors for product quality violations; Twenty-three ( 19) warning letters were issued for violations of milk quality standards or inspectional standards.

#### **OFFICE OF THE STATE VETERINARIAN AND ANIMAL HEALTH UNIT**

With USDA cooperative agreement funding support, the Bureau continued animal disease surveillance and outreach activities for Avian Influenza, Scrapie, and other reportable animal diseases; continued implementation of the National Animal Disease Traceability Program; and partially funded two positions associated with the cooperative agreement programs. The Bureau provided funding to the Connecticut Veterinary Medical Diagnostic Laboratory (CVMDL) at the University of Connecticut to conduct essential diagnostic services; to meet animal disease program surveillance goals; to assist in animal disease investigations; and to provide test data to support disease-free status certifications such as U.S. Pullorum-Typhoid Clean State. State animal health surveillance information is coordinated by the State Veterinarian and shared with USDA, APHIS, Veterinary Services through quarterly accomplishment reports and participation in the National Animal Health Reporting System (NAHRS) and the National Animal Health Laboratory Network (NAHLN).

Also, with USDA Veterinary Services cooperative agreement funding support, the Bureau continued its activities with Animal Disease Traceability, Official Animal Identification requirements and monitoring and enforcing compliance with state and federal laws relative to livestock and poultry interstate movement:

- Livestock and Equine Interstate Movement - processed 3,373 Interstate Certificates of Veterinary Inspection for livestock and equine animals moving into and out of this state.
- Issued 235 livestock import permits representing 3,098 animals imported into Connecticut including 1,548 cattle, 558 sheep, 47 goats, 938 swine, and 7 camelids.
- Gathered and Submitted 1,161 Brucellosis samples. 22 Bovine farms, 2 Caprine farms and 27 Porcine Farms to CVMDL.
- Gathered and submitted Porcine Pseudorabies samples from 27 porcine farms resulting in 219 samples to CVMDL
- Brucellosis vaccination certificates were issued for 364 cattle.
- Tuberculosis tests for cattle and goats totaled 2,337.
- Issued 2,325 poultry import permits representing 3,692,861 domestic poultry, upland gamebirds and pet birds imported into this state.
- Official Animal Identification devices issued (pursuant to USDA Animal Disease Traceability Rule): 2,275 RFID (radio frequency identification devices), 900 NUES (metal) ear tags issued directly to CT licensed livestock producers and licensed, accredited, category II veterinarians.
- Equine Infectious Anemia (EIA) Tests - processed 566
- Responded to 63 reports of sick or dead domestic poultry.

#### **FOOD SAFETY & AGRICULTURAL COMMODITIES UNIT**

Produce Safety Rule of the Food Safety Modernization Act (FSMA)

The Produce Safety team completed year one of five in the second cooperative agreement with the U.S. Food and Drug Administration (FDA). Year one activities included inspecting fruit and vegetable growers, implementing the farm registration and mobile inspection systems, and training new staff members while maintaining and focusing on our project plan. The registration process was streamlined by utilizing the state's E-license system. Currently, over 200 fruit and vegetable farms in Connecticut have registered through the state's E-License system which is also linked to the newly developed mobile inspection program. This number will continue to grow as we promote this program and continue to work with the state's fruit and vegetable growers. Currently, all farms in Connecticut with over \$25,000 in produce sales are subject to provisions of the federal Produce Safety Rule adopted by the Connecticut Department of Agriculture (DoAg). Year one did not reveal any egregious conditions. In addition to inspections, DoAg provides funding to the University of Connecticut Cooperative Extension through a Memorandum of Understanding to educate the state's farmers providing the nationally accredited Produce Safety Alliance Grower Training Course. In 2021, 9 industry stakeholders took part in this course. Additionally, DoAg is planning on continuing the partnership with FDA and work on the fruit and grower inspection program.

#### Produce Safety Inspections

- 207 registered fruit and vegetable growers
- 7 inspections

#### Animal Feed Regulatory Program Standards (AFRPS)

In March of 2021, the 11 Animal Feed Regulatory Program Standards (AFRPS) achieved full implementation status after the FDA 60-month audit. The Agricultural Commodities team continues to update and maintain AFRPS while regulating the animal feed industry in Connecticut. The Current Good Manufacturing Practices (cGMP) Inspection for animal feed manufacturing facilities has been streamlined by using the MiCorp mobile inspection program.

The AFRPS focus is on a regulatory foundation that includes standardized training, standardized inspection program, auditing, animal feed related illnesses or death and emergency response, enforcement program, outreach activities, planning and resources, assessment and improvement, laboratory services and a product/ingredient sampling program.

#### Agricultural Commodities

Sample collection for analysis by the Connecticut Agricultural Experiment Station

- 333 - seed samples
- 358 - animal feed samples
- 35 -fertilizer samples
- 6 - biosolid samples

#### Products Registered

- 15,580 Commercial animal feeds, including pet foods
- 5,239 Fertilizers
- 1,198 Soil Amendments
- 158 Agricultural Liming Materials

Shell Egg Inspection Program (table egg producers with less than 3000 birds)

- 2 Registered producers
- 12 Inspections

Poultry (slaughter) Processor Inspection Program (producers with less than 3000 birds)

- 3 Registered producers
- 2 Inspections

Controlled Atmosphere Facility Storage (apples)

- 3 registered facilities
- 120 inspections
- 5 certifications

FDA Contract Inspections

- 14- BSE Inspections (for materials at risk of transmitting Bovine Spongiform Encephalopathy)
- 4 Veterinary Feed Directive Inspections (Medicated Feed)

Animal Feed Good Manufacturing Practice (cGMP) Inspections

- 3 inspections

### **STATE ANIMAL CONTROL UNIT**

During the FY23, the State Animal Control Unit is comprised of 8 sworn State Animal Control Officers (SACO) (1 supervisor and 7 SACO's). The unit is tasked with performing routine and spot inspections of Department of Agriculture licensed and regulated facilities. These facilities are comprised of Commercial Kennels, Grooming Facilities, Pet Shop Facilities, Dog Training Facilities, Animal Shelter Facilities, Animal Importers and Municipal dog pounds. The unit is also responsible for conducting criminal investigations pertaining to animal cruelty. The state is broken down into six territories, each officer is assigned a territory of the state that encompass anywhere from 25-30 towns, and each officer resides in the area they are assigned.

During this fiscal year, the unit has conducted 448 formal investigations, which are defined as incidents that require being documented on a formal report form in the e-License investigative report module. The unit handled over 3,000 miscellaneous calls for service/complaints, 1 livestock damage claims, issued 36 written warnings, 15 infractions, 0 misdemeanor summons, and had 7 arrests.

There were 57 reports received from DCF reporting to the Department of Agriculture, reporting the Suspected Animal Harm, Neglect or Cruel Treatment. There were 107 suspected animal abuse reports received from various ACO's from all over Connecticut that were forwarded by DoAg to DCF under the current cross reporting statutes.

The unit conducted inspections of municipal dog pounds (84 inspections), pet shops (123), pet grooming facilities (614), commercial kennels (436), dog training facilities (196), and processed 42 rabies cases where humans or domestic animals were exposed to a rabid animal.

The Department of Agriculture continues to conduct the ACO Academy, an annual instructional training program, for animal control officers. Newly appointed municipal animal control officers must complete a minimum of 80 hours of instruction following a curriculum standard as mandated by C.G.S. §22-328. Due to the pandemic, the majority of the class was held virtually in both 2020, 2021, and 2022.

Approximately 28 municipal animal control officers received certificates of completion in the 2021 class. Instructors include Department of Agriculture staff, State's Attorneys, police officers, veterinarians, and other subject matter experts, all of whom volunteer their time.



## LICENSING UNIT

The Department has transitioned all licensing processes to the enterprise eLicense system. Most of the agency's licenses and permits are exclusively online, increasing productivity for office staff and convenience for the general public. The agency has eliminated paper renewals and certificates for all licenses, saving over \$11,000.00 in postage, which not only helps the environment but also speeds up the process. Total licensing fees collected for FY23 were \$2,298,684.38 of which 89% of the payments were made online.

### DoAg Licenses for FY23

Credential Type	Active, and In-Renewal
ANIMAL CONTROL OFFICER	264
ANIMAL IMPORTER	218
ANIMAL SHELTER FACILITY	15
BULK MILK TANKER	17
CERVIDAE HERDS	10
COMMERCIAL ANIMAL FEED MANUFACTURER	55
CHEESE MANUFACTURER	20
COMMERCIAL KENNEL	249
COMMERCIAL FEED	640
COMMERCIAL FERTILIZER	364
COMMISSION SALES STABLE	1
CONNECTICUT FARM WINERY, BREWERY AND CIDERY	33
CT GROWN MANUFACTURER FOR ALCOHOLIC LIQUOR	11
EGG GRADING PLANT	5
EQUINE AUCTION	1
GROOMING FACILITY	587
FRUIT & VEGETABLE GROWER	248
HEMP PRODUCER	56

LIMING MATERIALS	35
LIVE POULTRY DEALER	83
LIVESTOCK DEALER/BROKER	22
MAPLE SYRUP & HONEY PRODUCER	48
MILK DEALER	89
MILK EXAMINER	140
MILK LABORATORY	9
MILK PRODUCER	84
MILK SUB-DEALER	104
PET SHOP	87
POULTRY MORTALITY DISPOSAL	8
POULTRY SLAUGHTER FACILITY	3
RAW MILK CHEESE MANUFACTURER	5
RETAIL DAIRY STORE	2324
RETAIL RAW MILK PRODUCER	12
SOIL AMENDMENTS	301
SEED LABELER	94
SWINE GARBAGE FEEDER	3
SWINE GROWERS	12
TRAINING FACILITY	163
<b>TOTAL</b>	<b>6420</b>

#### **ANIMAL POPULATION CONTROL PROGRAM**

The Department's Animal Population Control Program (APCP) continues to increase the level of immunization against infectious animal diseases by providing sterilization and vaccination benefits for dogs and cats to (1) Connecticut residents for dogs and cats adopted from municipal pounds; (2) to low-income residents for dogs and cats that they own; and (3) to non-profit organizations engaged in activities aimed at reducing the population of feral cats.

In Fiscal Year 2023, the APCP provided vouchers for 4,967 animals (3,078 dogs and 1889 cats) from municipal impound facilities, pets owned by low-income CT residents and feral cats from non-profit organizations. 3,152 of the 4,967 vouchers issued were redeemed for a 63% overall sterilization rate for intact dogs and cats adopted from municipal impound facilities, issued to low-income residents and awarded to non-profit feral cat groups cats from non-profit organizations.

## **BUREAU OF AQUACULTURE**

The Department's Bureau of Aquaculture (DABA) is the designated State Shellfish Authority for the State of Connecticut, which participates in the National Shellfish Sanitation Program (NSSP) as a shellfish-producing State. The 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 safety of shellfish (oysters, clams, mussels and roe-on scallops) moving in interstate commerce and the uniformity of state shellfish programs. The NSSP model ordinance (NSSP-MO) is the regulatory guidance document that outlines the requirements that every shellfish program must meet to maintain compliance. Environmental Analysts working in the Shellfish Program participate in all aspects of the national program, including the Shellfish Growing Area and Shellfish Plant Standardization Programs.

The ISSC was formed in 1982 to foster and promote shellfish sanitation through the cooperation of state and federal control agencies, the shellfish industry, and the academic community. The ISSC adopts uniform procedures that are incorporated into the Interstate Shellfish Sanitation Program and implemented by all shellfish control agencies; gives state shellfish programs current and comprehensive sanitation guidelines to regulate the harvesting, processing, and shipping of shellfish; provides a forum for shellfish control agencies, the shellfish industry, and academic community to resolve major issues concerning shellfish sanitation; and informs all interested parties of recent developments in shellfish sanitation and other major issues of concern through news media, publications, regional and national meetings, internet, and by working closely with academic institutions and trade associations. Bureau Director, David Carey, is the Region 2 Alternate Regulatory Representative on the ISSC Executive Board and member of the Model Ordinance Effectiveness Review committee. Bureau staff have been appointed to several important committees and workgroups involved in policymaking at the national level (Aquaculture, Cleansing Study, Growing Area Classification, Restoration, Shellstock Identification, Traceability, Recall Guidance, Vibrio Research, Vibrio Illness Response, Laboratory).

## **BUREAU OF AQUACULTURE ACCOMPLISHMENTS**

- Staff performed sanitary and record inspections of the 90 shellfish harvest vessels, 45 harvest operations, and 24 wholesale dealer/distributors on a biennial basis as required by the NSSP, along with necessary follow-up inspections throughout the year.
- Added one new shellfish harvester as a Shellstock Shipper.
- The DoAG was successful in accomplishing the Small Harvester initiative, which was approved by the legislature. This will allow the DABA to give small 10 acre lots to new and small shellfish companies, rather than having to go through the bidding process where larger companies can easily win the highest bid. These lots will provide the foundation for a future generation of shellfish harvesters in Connecticut by allowing new individuals to more easily and affordably get into the business. The startup cost of a shellfish company is high, and cultivating shellfish takes multiple years before a profit is returned. The initiative will be announced in the fall of 2023.
- The DABA implemented an automated notification system for shellfish harvesters for each growing area closure or reopening. For decades, the DABA staff have spent 30-60 minutes for each closure or reopening notification, individually calling each harvester, updating hotlines, and sending closure notifications via email. Notification, including holiday and weekend coverage, for closures is essential so harvesters know what areas they can safely harvest from. The DABA recently received approval to use the Dial My Calls notification system, as DABA discussions with Everbridge stalled and were unsuccessful. As a result, the DABA staff are saving significant time now using the automated calls, and the shellfish harvesters are benefitting from more timely notification. Manually calling each harvester and answers call-backs innately prohibited

notification of all harvesters at the same time. The Dial My Calls system also has the ability to preschedule notifications, which will help to reduce, but not eliminate, the need for overtime weekend and holiday coverage.

- The DABA has successfully caught up on annual report writing deficiencies. The DABA staff worked to continue advancing the program despite disruptions during the COVID-19 pandemic, and staffing losses and changes. Staff continued to manage the statewide shellfish growing areas, and meet the sampling and reporting requirements, allowing the DABA to successfully complete the Growing Area Evaluation in June 2023.
- The DABA has been working to advance and streamline data storage, as the Bureau annually collects, analyzes, and runs statistics on thousands of samples. The DABA staff have enhanced the Access databases, improving user accessibility, creating a feature to generate automated sample counts to monitor the annual requirements for each shellfish growing area, and to reduce staff time burdens and data entry errors. The DABA must maintain and enter data into over 10 databases annually.
- The DABA implemented electronic reporting of landings from all harvesters effective for January 2023. Previously, DABA staff had to invest a significant amount of time manually entering the quantity of oysters and clams harvested from each shellfish growing area for all statewide companies. As an NSSP requirement, timely annual landing reporting from the State is essential to remain compliant. The DABA implemented a user-friendly, free system that is now allowing all harvesters to report their landings in real-time. This has saved a significant amount of staff time and will prevent the DABA from being in noncompliance with landing reporting in the future.
- The DABA, in collaboration with Connecticut SeaGrant, has made significant advances on designing a framework and guidance to support and regulate shell recovery. Oysters naturally recruit on shell; therefore, shell is an important commodity and currently most shell is sent to landfills. Shell recycling is a critical part of rehabilitating and restoring Connecticut's natural beds, which act as an essential source of oyster seed for the shellfish industry. Shell recovery and recycling involves collecting shell from restaurants and shellfish shucking facilities and cleaning, drying and storing that shell in large quantities. The cured shell is then planted in Connecticut shellfish beds, including the natural beds. In 2023, the DoAG funded the CORR (Collective Oyster Recycling and Restoration) Shell Recycling Program through a Climate Smart Agriculture Grant, thereby supporting the first large-scale nonprofit shell recycling/recovery organization in Connecticut. CORR started shell recycling in Fairfield on a small scale and has recently expanded to a second site in East Haven. CORR will be the first statewide shell recycling program in Connecticut. The Bureau as administrative authority over shell recycling, and consequently is organizing site reviews and operations plans with local and state agencies to ensure the shell recycling operations do not negative impact the environment or public.
- The DABA has hired multiple staff members over the FY to fill vacant positions. Matthew Bartell started in May 2022, and since has become the DABA's first licensed drone pilot, oversees electronic landing reports, and recently took over Aquaculture Permitting. Emily Marquis transitioned from a Fisheries Biologist I to an Environmental Analyst II in August 2022, and now assists with the management of shellfish growing areas and maintaining NSSP compliance. Dr. Lydia Bienlien was hired in January 2023, filling the Fisheries Pathologist position that remained vacant for six years. The DABA is grateful to have her experience and enthusiasm. Andrea Staak was hired as a Fisheries Biologist I in 2023 and has brought extensive laboratory experience. Richard Seiden was promoted to a Boat Captain in 2023, which required a change to the job classification, and better represents his decades of experience safely navigating Long Island Sound and maintaining the DABA's vessels.

- Collected and analyzed 5,426 seawater samples and 157 shellfish tissue samples for fecal coliform bacteria to classify and reopen shellfish growing areas, and 17 meat samples for MSC (male-specific coliphage) to assess viral impacts.
- Applied for, received, and administered multiple Association of Food and Drug Officials (AFDO) grants for the shellfish and dairy programs. The DoAG received \$33,541.60 through the Shellfish Equipment grant, which was used to purchase iPads to establish electronic record keeping capabilities in the field, make the two sampling vessels safer and more suitable for year-round sampling requirements, and create an ergonomic work environment for staff members that spend a significant amount of time conducting microscope work. The DoAG received \$16,848.49 through the Grade “A” Milk equipment grant, which was used to purchase safety and personal protective equipment for the dairy field inspectors, sanitation supplies to prevent cross contamination between facilities, and supplies to maintain compliance with the Sampling Surveillance Program of the Pasteurized Milk Program. The DoAG received \$8,927 through the Shellfish Training grant, which was used for three staff to attend the Interstate Shellfish Sanitation Conference (ISSC) and for three staff to attend the FDA Sanitary Survey training course. The DoAG received \$527 for employees to attend the Special Problems in Milk Protection training course. The DoAG also received up to \$9,039 in AFDO grant funds for staff to attend other trainings and meetings, like the National Association of Dairy Regulatory Officials.
  - Obtained FDA AFDO funding to produce a Harvester Log/Record Book for each operation to create continuity and consistency, streamlining the recordkeeping process for harvesters through the assembly of all the necessary forms.
- Vessel Monitoring System (VMS) has been installed on 136 vessels operating under seed transplant licenses or the Combined Harvest and Relay Shellstock Shipper 1 license. The VMS system is integrated into the GIS mapping data layer along with the shellfish licenses, enabling the Bureau to observe the activities of each shellfish vessel in real-time and capturing historical movement data. VMS has been crucial in aiding the Bureau with meeting NSSP compliance requirements.
- Continued progress with property maintenance \$277,000 bond appropriation: DAS Construction Service has selected an engineer firm to design and estimate cost of repairing bulkhead, installing a floating ramp and dock, boat lift, awaiting receipt of design drawings and cost estimates.

#### **NOAA AQUACULTURE INFRASTRUCTURE SPEND PLAN**

The DABA continued implementing year two of the aquaculture infrastructure investment spend plan authorized by NOAA for \$250,000.00 titled, “Reclamation of Public Natural Oyster Seed Beds.” The plan had received funding allocated to the Aquaculture sector dedicated to enhancement and rehabilitation work on State designated natural beds through use of Aquaculture Industry members and their vessels. A balance of \$112,000 remained for FY 2023; \$95,275.00 was utilized.

- The Plan contracted industry members to remove silt from Connecticut’s natural beds using open oyster or hydraulic clam dredges. The Contractor Project Cost was \$929.34/day or \$116.17/hour, which represented the cost of vessel fuel and staff time. Four companies participated for a total 752 hours and payments totaling \$47,500.00.
- This rehabilitation work reclaimed 14,336 bushels of oyster shell from the mud and silt and relocated it to a designated stockpile area on hard bottom.
- Eight companies participated for a total of 360 hours of shell stirring on the hard bottom across various portions of the 3,500 acre Bridgeport /Stratford Natural oyster seed bed, and payments totaling \$46,814.00.

- One company provided spawning oysters, which were planted on the Bridgeport/Stratford natural oyster seed beds; the payment totaled \$960.00.

## **LICENSING**

- The DABA successfully transitioned Finfish Aquaculture and Shellstock Shipper III applicants to e-licensing in FY 2022.
- The DABA added Seed Oyster Harvesting, Seed Importation, Scientific Research, and Seaweed Producer licenses to elicense in FY 2023.
- The DABA issued 23 Seed Oyster Harvesting, 22 Shellstock Shipper III, 10 Scientific Research, 8 Finfish Aquaculture, 3 Seaweed Producer, and 2 Seed Importation licenses this year.
- During the elicense transition, the DABA simplified the Seed Oyster Harvesting license from three separate licenses (captain, helper, and vessel) into one elicense certificate, making the process easier for applicants and eliminating the need for the DABA admin to process the fees for seed licensing.
- The DABA attempted to transition the Shellstock Shipper I license onto elicense; however, the system could not handle the large amount of data and constant changes that are necessary. The DABA is continuing to reduce paper usage, however, by electronically issuing the Shellstock Shipper I licenses using an electronic stamp and email.

## **SHELLFISH GROWING AREA PROGRAM**

- The Darien Long Neck Point Conditionally Approved area was upgraded to Approved, following improvements in water quality and completion of the 2022 Darien Survey field work.
- Staff has successfully implemented use of the ESRI Field Maps application to collect real-time data in the field while conducting survey work. This tool allows Analysts to directly map potential sources of pollution to the state's growing area in the field, eliminating time spent on this task after the completion of field work. In addition to adding points directly to our Sanitary Survey map, features include adding a photograph to the points, measuring distances to the water, and mapping perimeters of suspect areas. Previously, staff used paper maps and a geolocator and added findings to the Survey map manually from the paper maps or by uploading and transferring data from the geolocator. The geolocators relied on satellites that were not always available in the field and the units had issues with recording data. Paper maps were used as backup and were often the only record of the work completed. The use of this application saves hours of staff time, as data no longer needs to be manually added to the Survey maps, and makes final Survey Report writing significantly easier.
- Staff have been working to update the format of the comprehensive Sanitary Shoreline Survey Reports. The DABA Analysts are currently working on Survey reports for the Branford, Darien, Stonington, and Waterford/East Lyme growing areas.
- Three Environmental Analysts successfully completed the FD242, Sanitary Survey of Shellfish Growing Areas Course. This course is led by FDA specialists, and reviews basic concepts of sanitation for shellfish growing and harvesting areas.

## **ADVANCING THE GROWING AREA PROGRAM WITH NEW DRONE FIELD WORK**

The DABA must conduct Sanitary Surveys of every town with active shellfish growing areas every 12 years. This Survey includes inspecting all potential and actual pollution sources that could negatively impact the water quality of shellfish growing areas. Many areas on the Connecticut coast are difficult to access due to large expanses of private property, Island houses, or remote areas. The DABA's new drone and licensed drone pilot will greatly aid in completing this critical Survey work. The drone has heat sensing capabilities

that will help Analysts pinpoint potential sources of pollution entering the water. The drone can also record GPS coordinates, allowing staff to map findings in GIS and pinpoint the exact location of mooring fields and other pollution impacts to the growing areas. Additionally, the DABA must monitor boating activity near and in shellfish growing areas, which includes counting and mapping large concentrations of boats like at marinas and mooring fields, for each town every 3 years. The drone has already made this process easier and more efficient.



The DABA flying the drone out to map a mooring area (left) and landing the drone (right).

#### **CONNECTICUT'S *VIBRIO PARAHAEMOLYTICUS* CONTROL PLAN AND *VIBRIO* MONITORING PROGRAM**

*Vibrio* species are naturally occurring brackish and salt-water bacteria that are more prevalent during the summer months as the water warms. Some *Vibrio* species are pathogenic to humans and can contaminate seafood including molluscan shellfish. New England, including Connecticut, experienced an unprecedented *Vibrio parahaemolyticus* outbreak in 2013. Connecticut implemented effective *Vibrio parahaemolyticus* Control Plans, including shading, time-temperature requirements, and rapid cooling procedures when the water temperature exceeds 68°F, which have prevented further illness outbreaks since 2013. Read more about *Vibrio parahaemolyticus*:

<https://portal.ct.gov/DOAG/Aquaculture1/Aquaculture/Vibrio>

The Connecticut Department of Public Health reported an increased in the number of *Vibrio vulnificus* wound infections in 2020, with a total of five. These wound infections occurred when individuals exposed open cuts or wounds to Long Island Sound water in the summer. *Vibrio vulnificus* is naturally occurring in



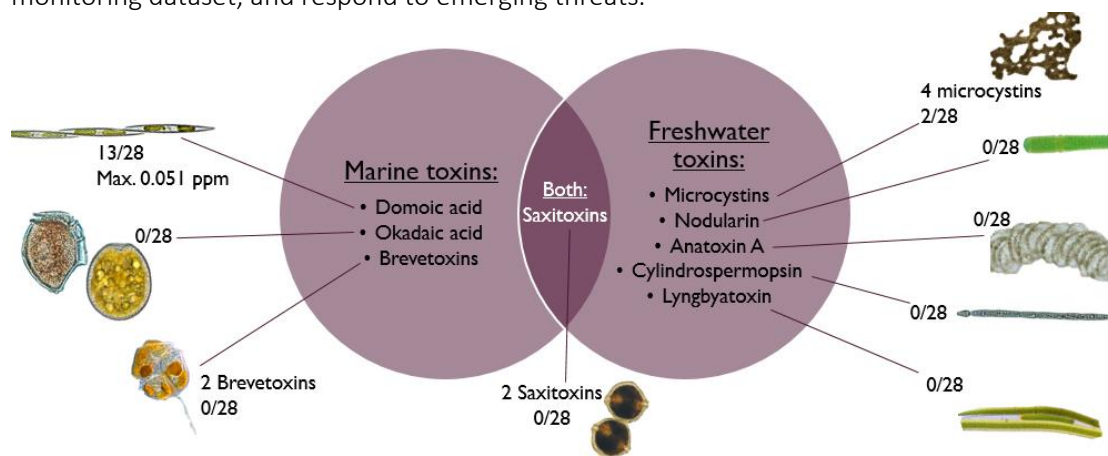
brackish and salt-water in the Gulf of Mexico and along the East Coast as far north as Maine. *Vibrio vulnificus* has never been associated with illnesses from Connecticut shellfish; however, partly in response to the increase in wound infections in 2020, the DABA laboratory advanced the in-house testing platform. Previously the DABA laboratory tested for total *Vibrio parahaemolyticus* and pathogenic *Vibrio parahaemolyticus* markers, and *Vibrio vulnificus* levels were added in 2022. This testing of Connecticut oysters statewide during the timeframe when Control Plans are implemented, July-September.

The DABA tested 12 oyster and 1 hard clam samples during FY 2023, which continue to show that the Connecticut *Vibrio parahaemolyticus* control plans are effective and that *Vibrio vulnificus* is below the limit of detection. In addition, the DABA annually reviews and contributes to illness investigations, which has continued to demonstrate that no *Vibrio* outbreaks have occurred from Connecticut since 2013.

### HARMFUL ALGAL BLOOM MONITORING PROGRAM

In FY 2023, the DABA continued to advance the comprehensive harmful algal bloom (HAB) and biotoxin monitoring programs, as the only state agency extensively monitoring HAB and biotoxin presence in real-time for regulatory response. This required 221 phytoplankton samples for harmful algal bloom cell concentrations and 13 samples for paralytic shellfish poisoning (PSP). Through the routine PSP management program, the DABA detected the earliest PSP closure in CT’s history in 2023. The DABA maintained the closure of the Mumford Cove recreational shellfishing area, and the Groton Shellfish Commission wardens diligently patrolled the area, until toxin concentrations were no longer detectable. Potentially due to milder winters, the DABA is having to adapt traditional seasonal timeframes with the changing environment to protect public health.

In addition to the 10 samples collected in the Spring 2022 (FY 2022) for toxin surveillance including marine and freshwater (cyanobacteria) toxins, 18 samples were collected in the Summer and Fall 2022 (FY 2023). This is the first statewide surveillance of multiple toxin concentrations in Connecticut shellfish ever completed. The results support the findings of the HAB monitoring program and that Connecticut’s Biotoxin Contingency and Management Plan is effectively protecting shellfish consumers. Connecticut is one of the first states to test shellfish for emerging cyanobacteria toxins, which can be transported from freshwater environments to shellfish growing areas via rivers. The DABA continues to monitor commercial and recreational growing areas to protect consumers, develop a broad HAB and biotoxin monitoring dataset, and respond to emerging threats.



Shellfish tissue was tested for 14 marine and freshwater toxins through the first statewide surveillance project. The diagram shows the different types of toxins (marine vs. freshwater), the causative organisms, and the number of times they were detected in shellfish tissue samples. The findings

demonstrated that domoic acid was the most common toxin in Connecticut shellfish, but all levels were far below the NSSP-MO regulatory limit. The only other toxin detected in Connecticut shellfish was microcystins, of which four types of microcystins were tested for, and only two were detected in 2/28 samples.

### PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) MONITORING

PFAS are currently an emerging public health concern in drinking water and food products. PFAS are a group of over 5,000 man-made chemicals that are persistent in the environment, but perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) are two of the most widely used and studied PFAS chemicals. Currently, there are no national regulatory guidelines for any PFAS chemicals in shellfish such as in the NSSP-MO, and much of the regulatory focus has been on drinking water. The first PFAS study in Connecticut shellfish was conducted by UConn Center for Environmental Sciences and Engineering (CESE), in collaboration with the Greenwich Shellfish Commission, in 2019. Shellfish, water, and sediment samples from areas around Greenwich were tested for 14 PFAS chemicals, including PFOA and PFOS. All of these Greenwich samples were below the limit of detection. While PFAS testing is expensive, the DABA tested naturally occurring shellfish in Connecticut growing areas potentially impacted by airports in 2022, as airports are known to be sources of PFAS contamination. UConn CESE analyzed the samples for DABA to ensure results are consistent across the State. None of the 28 PFAS chemicals, including PFOA and PFOS, tested for were detected in the two hard clam samples from Groton (impacted by the Groton-New London Airport) or one oyster and two hard clam samples from New Haven (impacted by the Tween New Haven Airport). Although preliminary and limited in scope, these results are reassuring regarding the emerging contaminant. Additionally, the FDA is testing a variety of market food items for PFAS, and the only seafood item listed as a concerning PFAS exposure level was canned clams from China ([FDA Update on PFAS Activities | FDA](#)).

### AQUACULTURE CERTIFICATES

- Connecticut has a wide diversity of aquaculture operation types, including 31 active individuals/companies/educational facilities with Aquaculture Certificates and the necessary permits for shellfish culture using upwellers, downwellers, set tanks, floating bags, longlines, bottom cages, and bottom netting. There are also certificates and permits for four shellfish hatcheries.
- In FY 2023, seven Aquaculture Certificates were issued by the Bureau to companies/individuals for shellfish. The seven applicants are using a variety of aquaculture methods:
  - 8 upwellers
  - 6 downwellers for the town of Fairfield
  - 75 bottom nets for hard clams
  - Individual cages with GoPro cameras for a NOAA/NMFS research project
  - 600 floating/sinking bags for oysters
  - 30 bottom cages for oysters
  - (5) 200' longlines for floating oyster bags
- In FY 2023, there were ten active individuals/companies with kelp Aquaculture Certificates and the necessary gear permits and one kelp hatchery. Three individual producers were licensed by the Bureau to harvest and sell kelp.
  - Two Aquaculture Certificates were issued for kelp farms that grew kelp for the first time in 22-23 season.
- The Bureau issued eight aquaculture producer permits for finfish grown for stocking ponds, at vocational schools for educational purposes, and to Ideal Fish for consumption. Nine Certificates of Aquaculture for Fish were issued in 2023.

## **ADVANCING THE STATEWIDE SHELLFISH DISEASE MONITORING PROGRAM**

The DABA hired a State Shellfish Pathologist, Dr. Lydia Bienlien, after the position remained vacant for six years. In this role, she will continue the critical work of monitoring shellfish diseases statewide to protect and maintain Connecticut's resources. She plans to bring the State's disease monitoring program into the 21<sup>st</sup> century by adding genetic capabilities to disease detection, specifically qPCR. She will be responsible for issuing shellfish health certifications for local and imported shellfish to maintain the biosecurity of the State. As a member of the East Coast Pathology Working Group, she is actively aware of and involved in activities concerning shellfish diseases all along the East Coast. She will serve as a resource and advisor for shellfish health activities within the State, working with partner agencies including industry members, and state and federal entities. For example, she will be contributing to the NOAA Milford Lab's EPA-funded study focused on creating a disease-resistant oyster strain by crossing oysters from across the country, thereby creating the "next generation oyster."

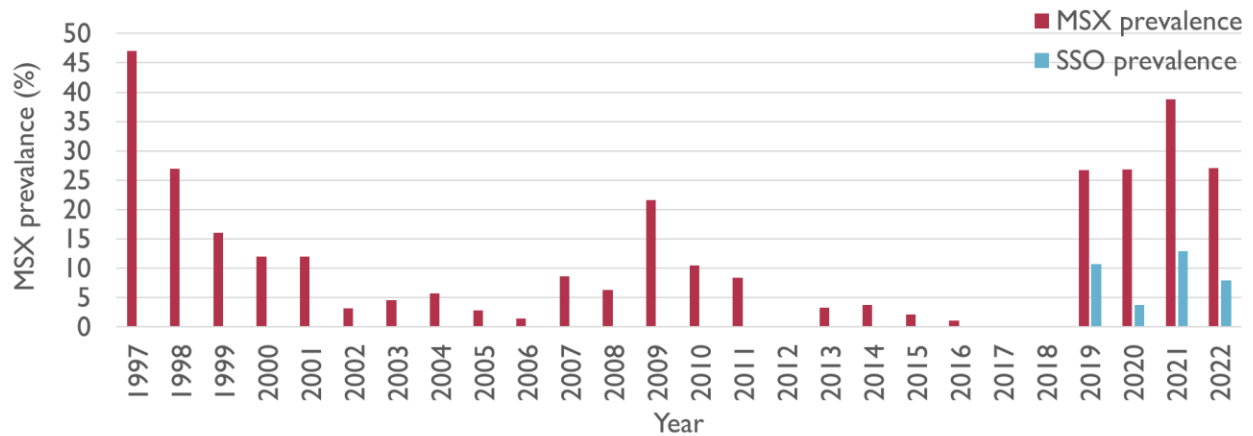
Shellfish are susceptible to a variety of diseases, some of which can cause epizootic outbreaks that result in widespread mortality events. In 1997, Connecticut experienced an epizootic event from Multinucleated Sphere Unknown (MSX), which significantly reduced oyster populations statewide and consequently negatively impacted shellfish aquaculture operations. Through effective disease management by the state shellfish pathologist and partner agencies, oysters in Connecticut began to recover by 2004 as populations developed natural disease resistance to MSX and disease-resistant strains were developed. Read more about shellfish diseases on the Bureau's webpage:

[https://portal.ct.gov/DOAG/Aquaculture1/Aquaculture/Oyster-and-Clam-Diseases.](https://portal.ct.gov/DOAG/Aquaculture1/Aquaculture/Oyster-and-Clam-Diseases)

While the DABA's shellfish pathologist position was vacant, staff secured United States Department of Agriculture (USDA) funding to monitor shellfish disease prevalence and intensity statewide from 2019-2022 through a collaboration with Roger Williams University. In 2023, the collaboration with Roger Williams University has continued, but in subsequent years testing will be conducted by Dr. Bienlien in the DABA's lab.

The following graphs demonstrate the importance of monitoring three relevant oyster diseases, MSX, SSO, and Dermo. The Bureau's former pathologist visually monitored shellfish disease prevalence and intensity from 1997-2016 using histology. Using the genetic method, qPCR, from 2019-2022, there was an increase in MSX and SSO disease prevalence, compared to the previous histology results. Given that MSX previously caused an epizootic event in Connecticut, it is important to effectively monitor and respond to potential shellfish disease outbreak before they occur. Although it has not previously caused an outbreak in CT, Dermo remains at a high prevalence statewide.

ANNUAL AVERAGE PREVALENCE OF MSX AND SSO (1997-2022)



ANNUAL AVERAGE DERMO PREVALENCE IN CT (1997-2022)



**AQUACULTURE DAIRY LABORATORY ACCOMPLISHMENTS**

DABA laboratory manager, Joseph DeCrescenzo, serves as the Dairy Laboratory Evaluation Officer (CT LEO) for the State of Connecticut, and is responsible for evaluating all Appendix-N Facilities and Certified Dairy Laboratories along with analysts performing milk laboratory test methods in accordance with the requirements of the Grade “A” Pasteurized Milk Ordinance. In June 2023, he renewed certification as the State Dairy LEO until August 2026.

On a bi-annual basis, the CT LEO schedules and performs laboratory evaluations of both FDA certified Appendix-N screening facilities and certified laboratories. There are a total of 2 certified laboratories and 10 screening facilities evaluated. Half of these facilities will be evaluated in 2023. In addition, the CT LEO continues to speak with both new farms and new dairy processing plants about becoming an FDA certified Grade A facility.

In addition to the evaluations, the CT LEO organizes proficiency tests for the labs and certifies all the analysts before coming online to perform the procedures, which includes providing written exams and practicals they must pass in order to become certified in the State. The LEO also helps new labs and already certified facilities develop and fine-tune all quality control/quality assurance operating

procedures at their facility. Connecticut has a total of 72 certified analysts that are evaluated every two years. In FY 23, 13 new analysts became certified to process dairy samples in the laboratory so far. The LEO continues to put together split samples that helps measure the efficiency of the CT Dairy Labs. This is a free service provided by the CT LEO and the DoAG. This will be available for all Grade A facilities that are certified for antibiotic screening. This will be done in November 2023.

The CT LEO also visits the 17 intra-state farms to help educate the farms about the necessity of antibiotic screening. The LEO organizes split samples for these facilities to participate in to effectively measure their efficiency in processing samples for antibiotic detection. These split samples will be done in November 2023.

*End Report*