



# 2017 Annual Report

Massachusetts  
Department of  
Agricultural  
Resources



# THE COMMONWEALTH OF MASSACHUSETTS

EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS



## Department of Agricultural Resources

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CHARLES D. BAKER  
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KARYN E. POLITO  
Lt. Governor

MATTHEW A. BEATON  
Secretary

JOHN LEBEAUX  
Commissioner

As I'm sure was the case with my predecessors, I began my tenure with great challenges and great opportunities. I'm also sure that duality is the reality that the constituents this Department serves also face. Looking back at 2015 and 2016, I'm filled with pride at the accomplishments of our dedicated staff; both new and old. More so, I feel a momentum toward building a greater, more robust MDAR that is able to handle both the responsibilities of the present with an eye toward tackling the challenges of the future, ever mindful of the legacy we've inherited. I would encourage you to review this report to learn more about the Divisions that constitute the Department and the work they've done.

Speaking of major challenges, our Commonwealth faced an abnormally long and severe drought in the summer of 2016 that created problems throughout agriculture. Losses incurred by some of our farmers were significant, serving to underscore the unpredictability of our changing climate. Farmers don't have the luxury of time to discuss global policies, but proactive governments can ill afford to ignore these problems. In that spirit, the Baker-Polito Administration, EEA Secretary Matthew Beaton and MDAR were proud to address the issue of climate change resiliency in a substantive way, by bolstering existing resources like Agricultural Environmental Enhancement Program (AEEP) and working with stakeholders to identify new opportunities to help build our constituents' ability to "weather the storms" of the future.

Per legislation, I co-chaired the Cranberry Revitalization Task Force. The Task Force, a group representing industry stakeholders and government agencies, sought to fully identify problems facing the cranberry industry in Massachusetts and work toward a menu of tangible solutions. Recommendations ranged from budgetary to non-budgetary and focused on key topics like renovation, technology and innovation and exit strategies. The Report produced is reflective of the legislative mandate, and will remain a blueprint not just in the short term but for years to come.

Administratively, MDAR weathered our own storm when we said goodbye to ten longtime employees who took advantage of the Administration's Early Retirement Program. Given the size of our Agency, losing staff is like losing a member of the family. In this case, we also lost over two hundred years of experience. I have consistently been impressed and amazed at how well our team has filled any void, doing their best to ensure a seamless transition for our constituents. It stands as another testament to the dedication of the people that make up this Department.

Though the multiple activities of MDAR's divisions, programs, and personnel are detailed throughout this Report, I want to personally recognize and applaud the efforts of all our managers, supervisors and staff to craft effective policies and practices. I particularly want to recognize and thank the team in the Commissioner's office: Chief of Staff Alisha Bouchard, Agricultural Economist Catherine deRonde, Executive Assistant Sheila Theodore, and Assistant Commissioner Jason Wentworth, for their efforts to keep the department moving ahead and to keep me focused.

Despite changes, both internal and external, we continue to look at what we do and how we do it and ask, "Can we do better?" In that spirit, we were pleased to participate in the 2016 Regulatory Review. Under Governor Baker's Executive Order 562, each agency was tasked with a full review of all regulations to identify superfluous or overly burdensome regulations, and to make changes through a full public process. Through this exercise, MDAR has hopefully provided some regulatory relief to our constituents while retaining the spirit of the regulation.

Looking at 2015 and 2016 in retrospect, I'm still amazed at how an agency this small can do so much and serve so many. I've learned in this time that there is something new to learn every day. Listen to the farmers, to the stakeholders, to those in the field ensuring that agriculture in Massachusetts survives and thrives. Listen to staff. Within their words lie the keys to not just weather the storm but also prosper. Sometimes, during bad seasons, a farmer's greatest hope is to break even...but always with an eye toward success the following season. Our philosophy at the Massachusetts Department of Agricultural Resources mirrors that ethos; meet challenges head on and work to support our dual mission. I'm honored to be a part of a team effort to do just that.

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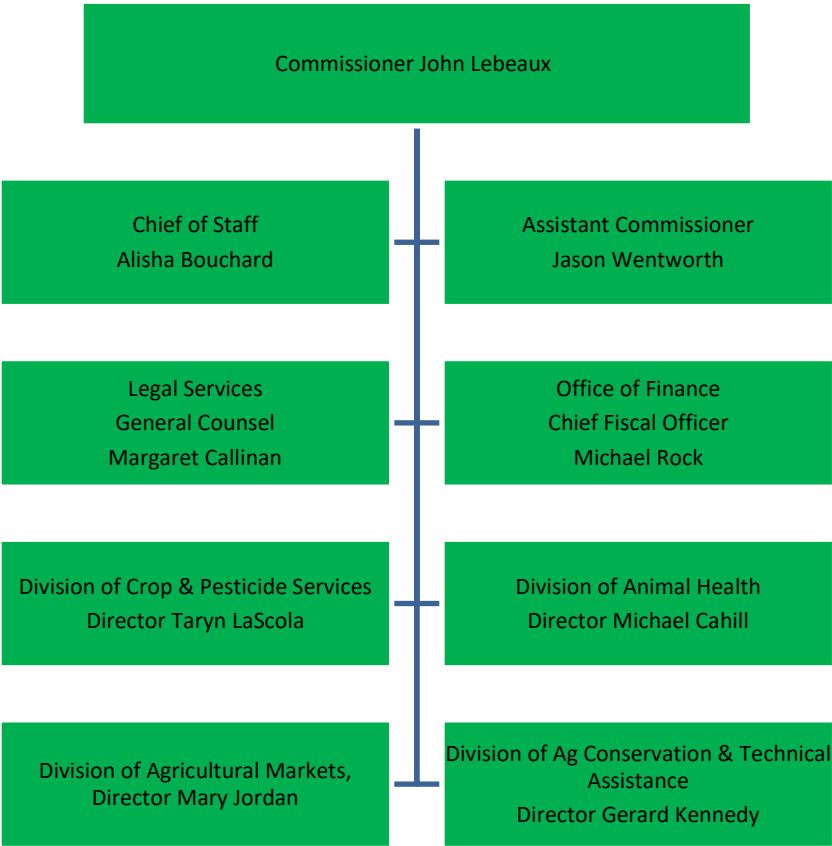
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# AGENCY ORGANIZATIONAL OVERVIEW

**MISSION:** The Massachusetts Department of Agricultural Resources’ (MDAR) mission is to help keep the Massachusetts’ food supply safe and secure, and to work to keep Massachusetts agriculture economically and environmentally sound.

**HISTORY:** MDAR has a long and illustrious history dating back prior to the creation of the US Department of Agriculture. As early as 1852, the various county presidents of the Agricultural Societies across Massachusetts came together to create the Board of Agriculture, a body that has, over the years, evolved into the current Board of Agriculture and the Massachusetts Department of Agricultural Resources within the Executive Office of Energy and Environmental Affairs.





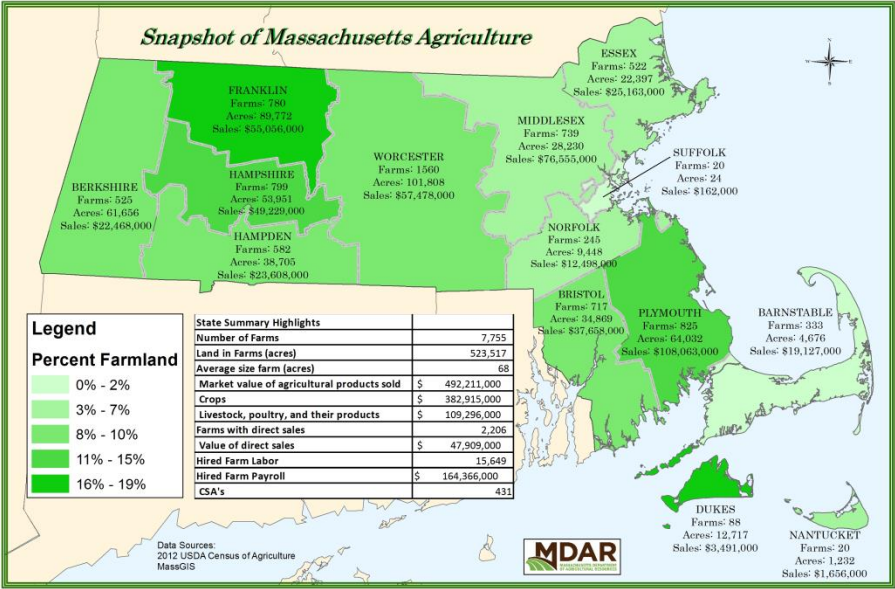
# SNAPSHOT of MASSACHUSETTS AGRICULTURE

Senior Economist  
Myron Inglis

Massachusetts has 7,755 farms on over 520,000 acres in production.<sup>1</sup> The agricultural industry provides employment to nearly 28,000 farm employees and produces an annual market value of over \$492 million dollars in agricultural goods. Most farms are individually, or family owned (82%) and fall into the category of “small farms” (95%).<sup>2</sup> The average farm has 68 acres with \$63,470 in annual sales.

The economic impact of agriculture extends beyond the farm gate. Massachusetts farms support a variety of ancillary businesses, including feed and equipment dealers and agricultural processing businesses. Agriculture in Massachusetts is estimated to have an economic impact of approximately \$10 billion and create approximately 45,000 additional jobs in Massachusetts.<sup>3</sup>

Massachusetts’ farmers face several challenges. Developmental pressure is one challenge. Massachusetts is the third most densely populated state in the U.S with 879 individuals per square mile<sup>4</sup>, and is ranked number four for highest farmland value at \$10,400 per acre.<sup>5</sup> This contributes to high developmental pressure from the non-agricultural sector on agricultural land. However, farmers have demonstrated great entrepreneurial skills and have taken advantage of high population density by marketing directly to consumers. Massachusetts ranks 5<sup>th</sup> in the nation for direct market sales to consumers and 3<sup>rd</sup> in the nation for direct market sales per operation.



High costs are another challenge to Massachusetts farming, particularly labor costs. Farmers on average spent 30.47% of their expense budget on hired labor costs. As a point of reference, the next highest expense on average is feed costs, and feed costs account for 9.4% of total expenses.

<sup>1</sup> All statistics are from the 2012 USDA Census of Agriculture unless noted otherwise.

<sup>2</sup> The United States Department of Agriculture defines small farms as farms with sales below \$250,000.

<sup>3</sup> Note that Farm Credit East uses an IMPLAN model for their study which relies on several assumptions. Commercial fishing activities are originally included in the IMPLAN model, but the above numbers does not include the economic impact of commercial fishing activities. Farm Credit East. (2015). Northeast economic engine: Agriculture, forest products and commercial fishing. Retrieved from <https://www.farmcrediteast.com/knowledge-exchange/Reports/northeast-economic-engine-agriculture-forest-products-and-commercial-fishing> [Accessed May, 2018]

<sup>4</sup> Population density is calculated by dividing total population by total land mass. Population information is from the United States Census Bureau Population Division. (2017). State population totals and components of Change: 2010-2017. Retrieved from <https://www.census.gov/data/tables/2017/demo/popest/state-total.html> [Accessed May, 2018] and land mass information is from the United States Census Bureau. (2010). State area measurement and internal point coordinates. Retrieved from <https://www.census.gov/geo/reference/state-area.html> [Accessed May, 2018]

<sup>5</sup> United States Department of Agriculture. (2017). Land values 2017 summary. Retrieved from <http://usda.mannlib.cornell.edu/usda/nass/AgriLandVa//2010s/2017/AgriLandVa-08-03-2017.pdf> [Accessed May, 2018]



A third challenge to Massachusetts’ farmers is the current federal administration’s trade policies. Ongoing trade negotiations and disputes with several foreign nations leave farmers with a large degree of uncertainty about their market opportunities.

Despite these challenges, Massachusetts was among several states between 2007 and 2012 that experienced an increase in both number of farms and farmland acreage. This is being driven by entry of new smaller farming operations, and expansion of the largest farming operations in the state.

**GREENHOUSE & NURSERY**

The greenhouse and nursery industry is Massachusetts’ largest agricultural sector. It has a market value of over \$144 million, and accounts for approximately 29% of the state’s agricultural economy. There are 1,039 commercial greenhouse and nursery businesses.

**PRODUCE**

The produce sector has an annual market value of over \$200 million, and accounts for 42% of the agricultural economy.<sup>6</sup> There are 1,428 vegetable farms who contribute over \$81 million to the Massachusetts agricultural economy, and 1,223 fruit farms who contribute over \$125 million.

**CRANBERRIES**

Massachusetts is the second largest cranberry producing state in the U.S. The cranberry industry is the second largest agricultural sector in Massachusetts with approximately 375 growers on approximately 13,250 bogs.<sup>7</sup> Massachusetts cranberry growers contributed \$99,846,000 to the agricultural economy in 2012,<sup>8</sup> but have faced several challenges in recent years and accounted for \$68,911,000 to the agricultural economy in 2016.<sup>9</sup>

One challenge to Massachusetts cranberry producers is the declining price of cranberries. The low cranberry price is due to a large and growing supply of cranberries. Foreign producer growth, especially in Canada, contributes to increased competition and supply in the cranberry market.

In an attempt to increase prices by reducing supply, the USDA is implementing volume controls as recommended by the U.S Federal Cranberry Marketing Committee (CMC), a national organization representing cranberry growers’ interests. The volume control will take 15% of U.S cranberries out of the market for the 2017-2018 growing season. An additional 25% of U.S cranberries for the 2018-2019 growing season is being proposed to be taken out of the market by the USDA on behalf of the CMC.

Another challenge to the Massachusetts cranberry industry is the federal administration’s trade policy. The cranberry industry is impacted by trade policy more than other agricultural sectors in Massachusetts partly due to political reasons. The current federal administration’s position on free trade leaves the cranberry industry with fewer markets abroad due to trade restrictions such as tariffs. China, the European Union, the North American Free Trade Agreement (NAFTA), and the Trans-Pacific Partnership (TPP) all represent growing market opportunities for the cranberry industry and the agricultural sector in general.

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<sup>6</sup> All numbers in the produce section includes cranberries.

<sup>7</sup> Cape Cod Cranberry Growers’ Association. (2018). Frequently asked questions. Retrieved from <https://www.cranberries.org/faqs> [Accessed May, 2018]

<sup>8</sup> National Agricultural Statistics Service. (2016). Cranberry highlights. Retrieved from [https://www.nass.usda.gov/Statistics\\_by\\_State/New\\_Jersey/Publications/Cranberry\\_Statistics/CRAN%20Aug\\_4pg.pdf](https://www.nass.usda.gov/Statistics_by_State/New_Jersey/Publications/Cranberry_Statistics/CRAN%20Aug_4pg.pdf) [Accessed May, 2018]

<sup>9</sup> National Agricultural Statistics Service. (2017). Massachusetts cranberries. Retrieved from [https://www.nass.usda.gov/Statistics\\_by\\_State/New\\_England\\_includes/Publications/Current\\_News\\_Release/2017/2016%20MA%20Cranberry%20Release.pdf](https://www.nass.usda.gov/Statistics_by_State/New_England_includes/Publications/Current_News_Release/2017/2016%20MA%20Cranberry%20Release.pdf) [Accessed May, 2018]

## **LIVESTOCK & POULTRY**

The livestock industry accounts for \$30,047,000 in the Massachusetts agricultural economy, and poultry and egg farms account for \$11,748,000.

## **AQUACULTURE**

The aquaculture industry in Massachusetts has 193 farms and is responsible for an annual market value of \$23,251,000.

## **DAIRY**

Massachusetts ended 2017 with has 131 dairy farms,<sup>10</sup> and produced 211 million pounds of milk during 2017.<sup>11</sup> Dairy farmers have struggled with low milk prices set by the Federal Milk Marketing Order and a high cost of production that typically exceed milk prices. Despite low milk prices, Massachusetts dairy farmers continue to find ways to innovate as the average milk production per farm is the highest that it has been in recorded history.

## **DAIRY FARMER TAX CREDIT PROGRAM**

In 2017, MDAR continued to administer the Massachusetts Dairy Farmer Tax Credit Program. This program was established in 2008 to offset cyclical downturns in milk prices by providing financial assistance to dairy farmers in the form of a tax credit. The state budget for the program is currently \$4 million. For each month that the average cost of production exceeds milk prices, the dairy tax credit is triggered for the given month(s). In 2017, the average cost of production exceeded the price of milk for all 12 months which triggered the tax credit for every month of 2017. The resulting tax credit payment to Massachusetts dairy farmers was \$4 million or \$1.90 per hundredweight of milk produced.

## **RETAIL COUPON FOR FLUID MILK PROGRAM**

This program was established to allow for the use of fluid milk coupons in promotional and marketing campaigns of milk and cream for the consumer. The goal of the program is to increase fluid milk consumption. The promotional coupons provide consumers discounts of milk. According to MDAR regulations, these promotions must not result in a sale of milk that is below the cost of production nor appear to be predatory towards any Massachusetts dairy farm that directly markets and sells its own fluid milk to consumers.

## **2017 USDA CENSUS OF AGRICULTURE**

The USDA Census of Agriculture provides rich extensive data and is performed every five years. The 2017 USDA Census of Agriculture is scheduled to be released in February 2019.<sup>12</sup> Until then, MDAR relies on the 2012 USDA Census of Agriculture, the USDA’s National Agricultural Statistics Service (NASS) reports, the USDA’s Economic Research Service, and individual industry reports for measuring the health of the Massachusetts agricultural economy.

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<sup>10</sup> MDAR internal records.

<sup>11</sup> National Agricultural Statistics Service. (2018). 2017 State agriculture overview: Massachusetts. Retrieved from [https://www.nass.usda.gov/Quick\\_Stats/Ag\\_Overview/stateOverview.php?state=MASSACHUSETTS](https://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=MASSACHUSETTS) [Accessed May, 2018]

<sup>12</sup> United States Department of Agriculture. (2017). Frequently asked questions. Retrieved from <https://www.agcensus.usda.gov/Help/FAQs/2017/> [Accessed May, 2018]

# MASSACHUSETTS FOOD POLICY COUNCIL ANNUAL REPORT 2017

## MASSACHUSETTS FOOD POLICY COUNCIL

(M.G.L. CHAPTER 20 § 6C)

### Chairman

John Lebeaux, Commissioner, MDAR

### Staff Liaison

Bonita Oehlke

[Bonita.Oehlke@state.ma.us](mailto:Bonita.Oehlke@state.ma.us)

(617) 626-1753

Late in 2010, Chapter 277 of the Acts of 2010 amended Massachusetts General Law Chapter 20 by inserting Section 6C, creating a 17-member Food Policy Council (“FPC”). The purpose of the council, detailed minutes and reports are at <http://www.mass.gov/eea/agencies/agr/boards-commissions/food-policy-council.html>

### State Agency Members

John Lebeaux, Commissioner, MDAR

Jay Ash, Secretary, Designee: Helena Fruscio, MEOHED

Dr. Monica Bharel, Commissioner, Designee: Lea Susan Ojamaa, MPH

Martin Suuberg, Commissioner, MDEP, Designee: Danah Tench

Jeff Wulfson, Acting Commissioner, Designee: Robert Leshin, MESE

Jeff McCue, Commissioner, Designee: (to be assigned) MDTA

### Legislative Members:

Senator Anne Gobi

Representative Hannah Kane

Senator Ryan Fattman

Representative Steve Kulik

### Industry Members (appointed by the Governor):

Vivien Morris, MS, RD, MPH, LDN, Community based nutrition and public health expert

Jeff Cole, Executive Director, MA farmers markets, direct to consumer marketing

Eric Stocker, Food processor and distributor

Samuel S. Wong, PhD, REHS/RS, Local health department representative

John Lee, Allandale Farm, Farmer

Amanda Kinchla, MS, Food Safety Extension Specialist, UMASS Amherst

John Waite, Food processor and handler

### 2017 Activities of the Massachusetts Food Policy Council

January 13, 2017, MA Division of Fisheries & Wildlife, Westborough

MA Local Food Action Plan goal: *Reduce food waste through state programs for farmers, restaurants, processors, schools and other institutions, and consumers. A current focus is to support the Commercial Food Waste Ban by developing policies and programs to divert food waste from landfills. Support for donation programs, conversion of food waste to animal feed, composting, and the development of anaerobic digestion facilities are also priorities.*

Council members agreed that measurable benchmarks are needed to achieve food waste goals. Stop & Shop’s New England digester was held as a model for retail stores. The Council also discussed the impact of proposed composting legislation on issues raised by farmers. Finally, ways to reduce food waste including incentivizing food donation and changing food product labeling legislation to reflect food safety were discussed. It was concluded that a white paper based on the presentations at this meeting would be developed.

March 10, 2017, UMass Amherst, Amherst

MA Local Food Action Plan goal: *Support increased purchases of Massachusetts grown and produced foods. The current focus is to support increased purchases of local foods by state institutions, public and private educational programs, and meals programs. Increased funding for state agency and institutional food procurement and standardized contract language for state and municipal purchasers, are also priorities.*

Presentations were made on Farm to School programming in both K-12 and university settings. Successes of farm to school were covered, as were the desire to expand the programs beyond produce, and how to approach the differing schedules of harvest time and the school year. Frozen products could be a way to better match local foods produced in the summer season with schools. Greenfield Public Schools were held as an example of success, but their Director of Food Services stressed that it has taken time for key stakeholders to come on board. There is some concern about food safety and the use of produce from school gardens. Science-based regulations and procedures need to be followed. It was concluded that a Farm to Institution White Paper be developed.

May 19, 2017, MA Division of Fisheries & Wildlife, Westborough

MA Local Food Action Plan goal: *Support and grow local food system infrastructure. The current focus is to target opportunities for growers, food processors and distributors to access capital, incentives, and technical assistance through agency partners and programs, private organizations, and universities.*

Focusing on local food infrastructure, the Council recognized the need for producers to receive technical assistance (TA) as a key for economic development. Most small businesses don’t have funding for a TA consultant. The Council discussed how to increase awareness and access to available TA. MassDevelopment spoke about the Collaborative Workspace Program, and how it is contributing to innovation and job growth. There were presentations on food safety while developing value-added foods, MA farm compliance with the Produce Safety Rule, and pollution prevention in the Massachusetts food and beverage industry. The Council voted to accept the Food Waste White Paper.

July 21, 2017, Worcester Union Station, Worcester

MA Local Food Action Plan goal: *Support regulatory policies and practices that allow farms and other food system businesses to thrive. The current focus is to develop circuit rider positions at state regulatory agencies, subject to appropriation, to provide food business guidance in a non-enforcement capacity in an effort to aid in compliance. Additionally, circuit riders will provide support and guidance to local regulatory agencies.*

A summary of findings from the MA Local Food Action Plan Working Group on Farming & Public Health was provided, which included several recommendations for regulatory reform. In a discussion of how the Food Code should be applied to farmer’s markets, a point was made that different municipalities have vastly different resources for their Boards of Health. Presentations were made on the roles of Boards of Health on farms, and the role of the MA Department of Public Health with local Boards of Health. A circuit rider position, offering technical assistance, was proposed as a possible solution.

September 15, 2017, Tower Hill Botanic Garden, Boylston

MA Local Food Action Plan goal: *Support expanded educational opportunities for farmers and other food system workers. The current focus is to support Massachusetts higher education, UMass Extension, and vocational technical schools by developing and offering appropriate curricula to meet food system needs.*

The Council discussed ways to engage and provide economic support for new farmers. Topics included how to improve education for food processing jobs, and how to direct students toward agricultural and food science careers. A panel from UMass Extension discussed their current programming. They also considered program improvement to better meet goals identified in the Food Plan, a potential challenge with current resources. A representative from the Massachusetts Association of Vocational Schools, and the Massachusetts Workforce Alliance also shared recommendations.

November 1, 2017, State House, Boston

MA Local Food Action Plan goal: *Support programs that facilitate access to healthy foods for underserved communities. A current focus is to provide support to leverage the Department of Transitional Assistance’s USDA/FINI grant award, known as the Healthy Incentives Program, which will increase use of SNAP at farmers markets, farm stands, mobile markets, and for community supported agriculture (CSA) programs, providing fresh, healthy food for low-income families, and increasing sales for Massachusetts farmers. Additional examples include the MA Food Trust and the MA Food Ventures Program.*

The topic focus was the Healthy Incentives Program (HIP). Representatives from DTA and DPH gave their department’s perspectives on the success of HIP. Histories of SNAP at MA farmer’s markets and the HIP program were provided. Representatives from local organizations shared success stories and positive feedback from farmers, mobile markets and farmer’s market managers were provided. The future of the HIP program was discussed. The Council voted to accept the Farm to Institution White Paper.



# MASSACHUSETTS DAIRY PROMOTION BOARD 2017 ANNUAL REPORT

## OVERVIEW

The Massachusetts Dairy Promotion Board (MDPB) develops programs and policies with the objective of increasing the consumption of Massachusetts dairy products through promotion, research, and educational activities. The nine member board is comprised of representatives from the dairy farming associations, milk processors, the Department of Agricultural Resources (MDAR), and the Executive Office of Administration and Finance (ANF).

### 2017 Board Members

(Appointed by the Commissioner of the MDAR)

Chairman: Commissioner John Lebeaux, MDAR  
Designee for Chair: Mary Jordan, MDAR  
Vice Chairman: David Hanson, Agri-Mark  
Secretary: Krisanne Keobke, MA Cooperative Milk Producers Federation, Inc. (until October)  
Treasurer: Darryl Williams, MA Association of Dairy Farmers  
Lynne Bohan, Massachusetts Food Association  
Melissa Griffin, Agri-Mark  
Kathleen Herrick, MA Association of Dairy Farmers  
Warren Shaw, New England Producer Handler Association  
Jim Hunt, MA Cooperative Milk Producers Federation, Inc.  
ANF Designee Brian McKeon

### MDPB Background

Massachusetts Dairy Farm Revitalization Task Force  
On May 10, 2007 the acting MDAR Commissioner, Scott J. Soares issued a Declaration of Crisis in the Dairy Industry as a response to the Dairy Farmer Petition for Relief. One result of the Declaration was immediate action by the Governor and the Legislature to provide emergency relief to dairy farmers and to establish a Dairy Revitalization Task Force. As a result of the crisis conditions, Gubernatorial and Legislative action yielded Chapter 42 of the Acts of 2007, established the Dairy Farm Revitalization Task Force. The Task Force consisted of 17 members including three dairy farmers, six legislators, a milk processor representative, and seven various members of the Executive Branch. The purpose of the Task Force was to:

*“...investigate short and long-term solutions to preserving and strengthening the dairy farm industry in the Commonwealth. Said investigation shall include methods to promote the innovation in, and the revitalization of, the Massachusetts dairy farming community, including without limitation, investigating the impact of increased fixed costs borne by the dairy farming community*

*including, but not limited to, fuel prices, healthcare and insurance; promoting locally produced milk; and promoting alternative and renewable energy uses for farmers.”*

On November 9, 2007 a report to the Legislature was filed. The Task Force recommended enacting legislation to establish a **Massachusetts Dairy Promotion Board** (M.G.L. Chapter 310 Sec: 30(a). The Massachusetts Dairy Promotion Board as stated in M.G.L. Chapter 310 Sec. 30(d), assesses a fee of 10 cents per hundredweight of all milk production that is commensurate with the credit allowed for producer contribution to state qualified programs (QP’s) under the Dairy Production Stabilization Act of 1983. MDPB verifies production reports with the National Dairy Promotion and Research Board semi-annually to assure compliance with the assessment provisions of the Act.

In 2017, the following actions were taken by the Board in accordance with the mission to develop programs and policies with the objective of increasing the positive image of Massachusetts dairy products through promotion, research, and educational activities.

**2017 Adopted Motions**

- Approved allocation of \$60,000 for the NE Dairy & Food Council to provide sub-grants to schools in Massachusetts in connection with the “Fuel Up to Play 60” school wellness and nutrition initiative.
- Approved allocation of \$25,000 for the NE Dairy Promotion Board to implement “Your ‘FOS25’ Zip Trip’ sponsorship.
- Approved allocation of \$37,000 to CISA to leverage the Buy Local Movement to Promote Massachusetts Dairy through educating consumers directly about the challenges and contributions of local dairy farmers.
- Approved allocation of \$9,500 to the Massachusetts Association of Dairy Farmers to build a campaign aimed to educate consumers on the value of Massachusetts dairy agriculture and dairy products.
- Approved allocation of \$5,000 to Eastern State Exposition for promoting Massachusetts Dairy Farmers at the Big E through promotion at cooking shows as well as messaging.
- Approved allocation of \$24,950 to Essex Agricultural Society DBA Northeast Harvest/ Topsfield Fair to increase the demand for Massachusetts Dairy Products through education and advertising through the purchase of a durable plastic milking cow for demonstrations during the Topsfield Fair as well as educational days for students in Essex County.
- Approved allocation of \$4,325 to the Center for Environmental Studies for producing digital copies for better access to ‘Forgotten Farms’ film.
- Approved allocation of \$5,520 to the Massachusetts Cheese Guild for the updating of information and printing of the ‘Great Cheeses of Massachusetts’ brochure.
- Approved allocation of \$12,413 to the Massachusetts Farm to School Initiative that will focus on a Massachusetts Agriculture in the Classroom activity “From the Farm to the Classroom and Back.”

**2017 Total Revenue:** \$236,259.15

**2017 Total Expenses:** \$215,692.38

Balance: \$217,188.35



# FINANCIAL REPORT

## Chief Financial Officer

Michael Rock

Financial achievements of FY17 included new funding opportunities that allowed MDAR to introduce programs such as the Ag-Energy Special Projects Grant Program, the Produce Safety Program and the Food Ventures Program described further below.

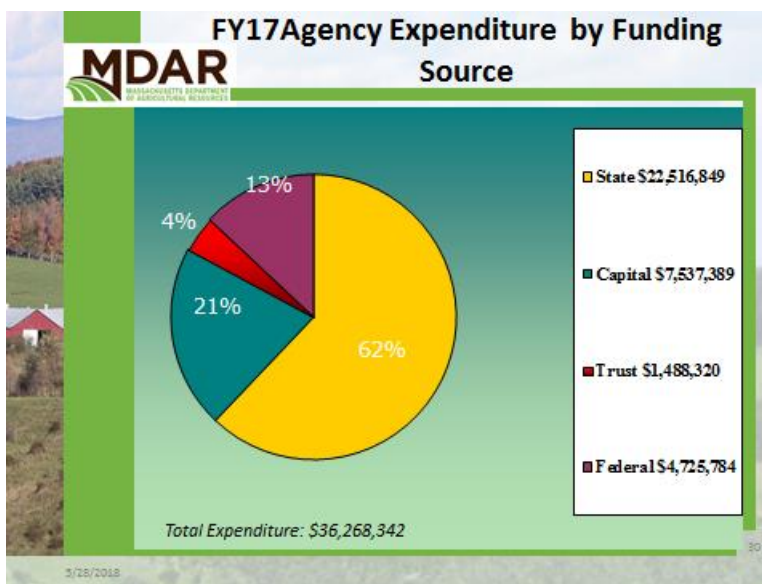
The Ag-Energy Special Projects Grant Program was the result of a new partnership arrangement with the Massachusetts Department of Energy Resources (DOER) allowing the formation of a new \$1 million “Special Projects” annual grant program. Ag-Energy “Special Projects” funding is designed for specific higher capital cost, energy saving and energy replacement technology implementation opportunities that improve energy efficiency and facilitate alternative clean energy needs.



The Massachusetts Produce Safety Program began with the award of a five year \$3.6 million USDA grant with the mission of integrating Massachusetts’ current voluntary farm food safety program with the requirements of FDA’s Produce Safety Rule to create a comprehensive and scalable produce safety program in Massachusetts. The grant provided for the hiring of five (5) inspectors.

The Massachusetts Food Ventures Program’s goal is to increase access to healthy, affordable food options and improve economic opportunities for low to moderate income communities by providing grants to support food ventures, sited primarily in or near communities of low or moderate income, including Gateway Cities and rural communities. Capital funding of \$1 million annually is available to local Massachusetts food enterprises to improve access to Massachusetts grown, harvested or caught food products through the development of collaborations with local agricultural enterprises and private/public entities.

The above programs are reflective of the agency’s varied funding sources being supported respectively by trust, federal and capital (bond) resources. MDAR expended nearly \$36.3 million dollars in FY17. FY17 expenditures by funding source were as follows: operating (budgetary) 62%, capital (bond) 21%, federal 13% and trust funds 4%.



## BUDGETARY APPROPRIATIONS

The Department expended 99.78% of its final FY17 budgetary appropriated amount of \$22.57 million, reverting \$51,840. Of the reversion amount, \$47,161 was Administration and Finance (ANF) “planned savings” or a forced reversion to eliminate the FY17 deficit. The balance of \$4,679 was unused Fringe Benefit chargeback (\$1,443) and vehicle repair funds (\$3,236). ANF does not allow end of the year transfers between spending categories in anticipation funds will revert and help balance the Commonwealth’s budget.

### Administration Account (2511-0100)

The Administration Account funds the day-to-day operations of the agency. MDAR final available FY17 after 9C cuts was \$5.524 million. MDAR expended over 99% of available funding reverting just \$51,840. Of the reversion amount \$47,161 was Administration and Finance (ANF) “planned savings” or a forced reversion to eliminate the FY17 deficit. The balance of \$4,679 was unused Fringe Benefit chargeback (\$1,443) and vehicle repair funds (\$3,236). ANF does not allow end of the year transfers between spending categories in anticipation funds will revert and help balance the Commonwealth’s budget.

Administration Account spending by category was as follows:

- 83% for employee’s salaries and benefits
- Approximately 11% for earmarked programs: Buy Local, Mass. Farm to School, apiary, and SRB mosquito control.
- 1.6% (\$88K) as part of an annual matching share to the agency’s federal “Pesticide Analytical” grant, to fund lab services with the University of Mass Amherst Massachusetts Pesticide Analysis Laboratory
- The remaining funds supported the agency’s day-to-day operational expenses

### Supplemental Food Appropriation (2511-0105)

The MDAR Supplemental Food Appropriation provides for the purchase of supplemental foods for the Emergency Food Assistance program. FY17 funding of \$17M comprised 75% of the agency’s state appropriated budgetary funding and provided 21.5 million meals. The agency utilizes 2% of Supplemental Food funding to administer the program. MDAR contracts with the Greater Boston Food Bank, which is responsible for the distribution of a percentage of funds earmarked for other Massachusetts food banks under a contractual agreement. MDAR expended 100% of available funding.

### Integrated Pest Management (2511-3002)

The Integrated Pest Management (IPM) program was level funded at \$57,553 in FY17. The IPM program has never recovered from the pre-recession period. IPM account funding was 81% less when compared to fiscal year 2008 funding level of \$303,000. The funding reduction has impacted the agency’s ability to meet its statutory requirements under Chapter 85 of the Acts of 2000 (“Act to Protect Children and Families from Harmful Pesticides”) and MGL Chapter 132B (Massachusetts Pesticide Control Act).

**CAPITAL (BOND) ACCOUNTS**

The agency expended 100% of its \$7.5 million in capital (bond) program funding. Capital funded programs included the Agricultural Environmental Enhancement Program (AEEP), Agricultural Preservation Restriction (APR) Program, Farm Viability Enhancement Program (FVEP), Food Safety, Stewardship, Food Ventures and Urban Agriculture. By utilizing a mixture of capital and federal funds the agency expended nearly \$5.9 million on Agricultural Preservation Restrictions (APRs) to protect 553 acres and another \$450,000 on six (6) agricultural covenants to protect an additional 669 acres.

**FEDERAL FUNDS**

MDAR expended \$4.73 million in federal funds in FY17. The “Farmland Ranch and Protection Program” (FRPP) grant was the largest component of the agency’s federal funds expenditures comprising nearly 45% of the total. The FRPP grant is utilized to fund a variety of agency programs including the APR program, the APR Improvement Program, the Farm Energy Program and the Matching Enterprise Grants Program.

**REVENUE**

MDAR is currently responsible for the collection of a number of fees (29) ranging from pesticide applicator and milk dealer licenses to nursery and greenhouse inspection fees. A comparison of the last five fiscal years is provided below.

<u>Year</u>	<u>\$ Amount</u>	<u>% Increase/Decrease</u>
2013	\$5,856,068.00	3.96%
2014	\$6,158,524.00	5.16%
2015	\$6,244,823.00	1.23%
2016	\$6,291,262.00	.74%
2017	\$6,651,526.00	5.73%

MDAR revenue grew by nearly 6% in FY17 reaching a new all-time high of \$6.651 million. The growth rate was the highest since FY11. For the ninth year in a row, MDAR generated more revenue than it expended for the administrative costs of the agency. In FY17 MDAR revenue exceeded the agency’s yearend operating budget of \$5.58 million (Administration and IPM accounts combined) by 19.1% or \$1.07M.

# DIVISION OF AGRICULTURAL MARKETS

**Division Director**  
Mary Jordan

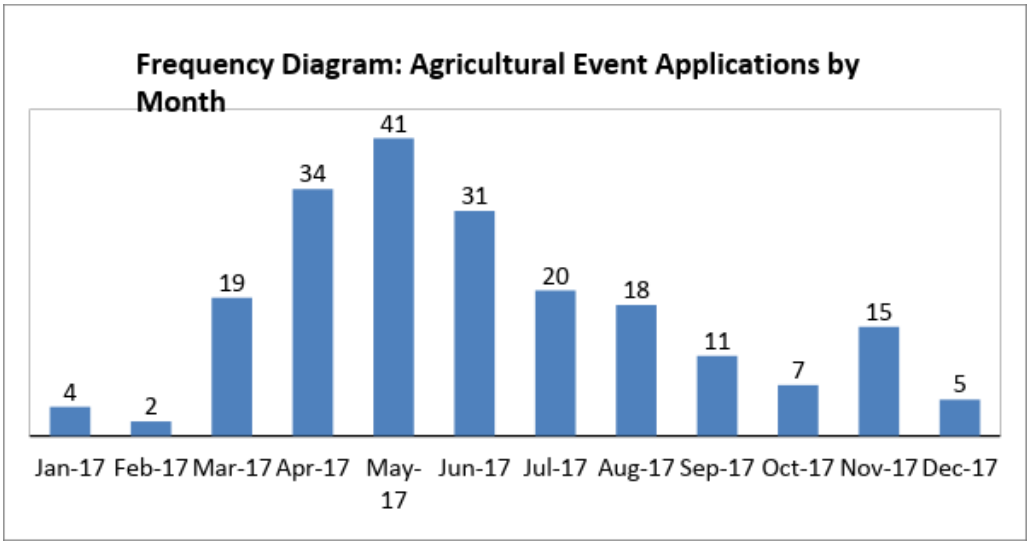
## AGRICULTURAL EVENT CERTIFICATION PROGRAM

Rebecca Davidson

*On August 5, 2010, Governor Patrick signed S 2582: An Act Relative to Economic Development Reorganization that provides for the sale of wine from a licensed farm winery at approved agricultural events in Massachusetts. According to the legislation, agricultural events such as Farmers' Markets, fairs and festivals must be approved and certified by the Department of Agricultural Resources before a winery can apply for the appropriate license from the local licensing authority.*

In 2017, MDAR processed 206 applications for 93 certified agricultural events. A survey MDAR coordinated in 2015 showed strong direct sales from wineries vending at agricultural events. According to the 2015 survey results, wineries sold on average \$18,190 worth of wine at agricultural events, an average of 1200 bottles per winery. Close to 60% of wineries have already expanded both their grape and wine production as a result of their sales at agricultural events, and more than half of wineries have hired additional employees, for a total of 10 full-time and 23 part-time hires. An additional 26 part-time hires are planned. The sales and economic development figures are great news for the bottom line of Massachusetts wineries and for the Commonwealth.

The following frequency diagram describes the seasonality of the Agricultural Event Certification Program.



## CULINARY TOURISM – SAVOR MASSACHUSETTS!

Bonita Oehlke

Visits to craft beverage businesses tap and tasting rooms making wine, hard cider, distilled spirits and beer are the fastest growing sector of culinary tourism, led by beer tourists. Culinary tourists also seek farmstead cheese businesses and maple products during farm visits. These Massachusetts businesses attracted culinary tourists from Massachusetts and beyond. Culinary Tourism is a subset of agri-tourism, showcasing distinctive and memorable gastronomic experiences. It fosters valuable connections in the agricultural community with the tourism and hospitality sector that benefits growers and food producers who offer unique culinary experiences.

MDAR worked with the MA Craft Distillers Alliance, the MA Brewers Guild, the MA Farm Winery and Growers Association and the state Alcohol Beverage Control Commission to update the dedicated pages for each of these growing craft beverage categories. Use of farm ingredients is encouraged whenever possible and highlighted in the listings. The majority of hard cider in the state use apples grown in Massachusetts. MDAR’s culinary tourism page includes special event information including the Massachusetts Farm Winery and Growers Association summer CRUSH event, Franklin County Cider days, and other festivals relating to a wide range of products.

Supporting new business for farmstead cheese makers continues. MDAR promoted the MA Cheese Guild during their fifth Massachusetts Cheese Festival and their educational and consumer events for cheese lovers, held throughout the year, as well as listings on MDAR’s website.

MDAR worked with the MA Maple Producers Association to coordinate a maple kickoff in March, showcasing the first farm product of the season. Massachusetts sugar makers produced more than 84,000 gallons of syrup in 2017, a modern day record crop; and Massachusetts maple producers’ sales each year contribute more than \$6 million to the Commonwealth’s economy, employ more than 1,000 workers, and steward more than 15,000 acres of woodland. Maple farmers perpetuate a cherished New England tradition and have a positive impact in Massachusetts on the economy, environment and way of life. Maple weekends were also promoted, featuring restaurants using local syrup. Culinary tourism associated with maple syrup production is important for the revenue generated by maple farms, restaurants, bed and breakfasts, country inns, and other attractions in farm communities.

A booth at the Boston Local Food Festival on the Rose Kennedy Greenway in 2017, sponsored by the Sustainable Business Network, offered an opportunity to promote culinary tourism and MDAR consumer resources to some 30,000 attendees. Savor Massachusetts offers hundreds of web-based resources for the culinary traveler, growers and chefs, including wine, cheese, hard cider, distillery & brewery “trails”, Log on to [www.mass.gov/massgrown](http://www.mass.gov/massgrown) and click on Savor Massachusetts!

**EXPORT MARKET DEVELOPMENT**

Bonita Oehlke

Commissioner Lebeaux is a board member of Food Export USA Northeast, a USDA Cooperator, leveraging access to programs and services for Massachusetts food, seafood and agricultural businesses for export market and sales development. Funding is available through the USDA Farm Bill, Market Access Program. Small and medium size businesses can receive 50% reimbursement for funds used for eligible export development expenses such international marketing and promotion support, trade events and labels. Matching awards to Massachusetts companies totaled \$798,262 to 30 food businesses in 2017. Six seafood companies were included, with awards totaling \$189,050, 24% of the allocation. The value of Ag & Related Products (which includes fish) total was just over \$1 billion in 2017, down 1% from 2016. The value of Processed Food totaled \$744.4 million, about 75% of total exports (source: USDA/FAS/GATS).

Besides international trade shows, major US trade events that host international buyers are also eligible. To participate, products promoted must have at least 50% ingredients grown from the US. A wide array of programs and services are available for Massachusetts agricultural, seafood and food businesses, including exporter education, in-country market research, and support at domestic and international trade shows. Buyers Missions offer a low-cost, low-risk opportunity to meet with international buyers. A Buyers Mission was held in Boston in early 2017, and then missions to national trade shows including the Summer Fancy Food Show and Natural Products Expo East, as well as Seafood Expo North America. MDAR has been working with seafood export marketing since 2004. New Bedford has the highest value of fish landings in the United States, and several seafood businesses there and along the coast are using these programs and services.

MDAR participated in the Export Expo in 2017, coordinated by the MA Export Center in Boston. Other partners included the Cranberry Marketing Committee, National Confectioners Association, Brewers Guild, MA Office of International Trade and Investment, and the Department of Commerce.

**FARMERS’ MARKET NUTRITION PROGRAM**

Rebecca Davidson

In 2017 the USDA FNS awarded Massachusetts with \$467,103 in federal food dollars to distribute to low income elders along with \$51,900 to use to administer the program state-wide. In 2017, 23,925 Massachusetts seniors and disabled individuals participated in the program compared with 23,215 in 2016. Participating elders received a benefit of \$25 per person for the 2017 growing season. 74.5% of issued coupons were redeemed at Massachusetts farmers markets and farm stands. This figure is slightly more than the 74% redemption rate in 2016. In 2017, the program utilized 99.2% of the USDA 2017 Food Allocation, as compared to 96% of the 2016 Food Allocation. The Senior FMNP home bound delivery program served 2,790 seniors in 2017 throughout the Commonwealth of Massachusetts. 26 Elder Nutrition Programs distributed coupons and produce to seniors and disabled individuals across the state of Massachusetts.

In 2017, the USDA FNS awarded Massachusetts with \$432,426.00 in federal food dollars to distribute to participants in the WIC (Women, Infants and Children) program. The 2017 WIC Farmers’ Market Nutrition Program (FMNP) served 31,681 women, children, and infants over 6 months with coupons to buy fresh produce at farmers markets, which is an increase from the 28,435 served in 2016. 55.7% of WIC FMNP coupons were spent at farmers’ market and farm stand vendors. That figure is down 2.7% when compared to last year’s 58.4%. Statewide the program utilized 81.3% of the USDA FNS 2017 allocated food dollars. This has decreased from the 88% utilization rate from 2016. Participants received a benefit of \$20 per person for the 2017 growing season.

The program certified 230 farmers’ markets and 384 growers to serve the recipients of the Senior and WIC Farmers Market Nutrition Programs.

Overall, these funds successfully increased the purchase of \$816,212.50 worth of fresh, local produce, which represents a 5% increase from 2016.

**FEDERAL - STATE MARKETING IMPROVEMENT PROGRAM (FSMIP) GRANT PROGRAM**

Rebecca Davidson

*FSMIP is designed to assist in exploring new market opportunities for U.S. food and agricultural products, and to encourage research and innovation aimed at improving the efficiency and performance of the U.S. marketing system.*

FSMIP funds a wide range of applied research projects that address barriers, challenges, and opportunities in marketing, transporting, and distributing U.S. food and agricultural products domestically and internationally. Eligible agricultural categories include livestock, livestock products, food and feed crops, fish and shellfish, horticulture, viticulture, apiary, and forest products and processed or manufactured products derived from such commodities. Reflecting the growing diversity of U.S. agriculture, in recent years, FSMIP has funded projects dealing with nutraceuticals, bioenergy, compost and products made from agricultural residue.

Proposals may deal with barriers, challenges or opportunities manifesting at any stage of the marketing chain including direct, wholesale, and retail. Proposals may involve small, medium or large scale agricultural entities but should potentially benefit multiple producers or agribusinesses. Proprietary proposals that benefit one business or individual will not be considered.

Proposals that address issues of importance at the State, multi-State, or national level are appropriate for FSMIP. FSMIP also seeks unique proposals on a smaller scale that may serve as pilot projects or case studies useful as models for others.

Of particular interest are proposals that reflect a collaborative approach between the States, academia, the farm sector and other appropriate entities and stakeholders.

For more information on the FSMIP program please refer to:

<https://www.mass.gov/how-to/apply-for-the-federal-state-marketing-improvement-program-fsmip>

<http://www.ams.usda.gov/AMSV1.0/FSMIP>

**2017 Ongoing Project:**

In 2015, \$44,297 was awarded to the Massachusetts Department of Agricultural Resources, in partnership with Community Involved in Sustaining Agriculture, to evaluate the effectiveness of an on-line ordering system that will 2 enable wholesale buyers to order Massachusetts farm products, improving marketing efficiency and supporting the growth of sales of locally grown products. This

project began in September 2015 and was completed in March 2018. The Final Report will be available at: <https://www.ams.usda.gov/services/grants/fsmip>.

## VALUE-ADDED TECHNICAL ASSISTANCE

Bonita Oehlke

Growers looking to add value to their harvest for season extension and diversification and food entrepreneurs with new products have access to inspected non-profit shared-use kitchens across the state, including the Dartmouth Grange Kitchen, Commonwealth Kitchen (CWK) in Boston, Stockpot Kitchen in Malden, and the Western MA Food Processing Center in Greenfield. MDAR shared resources with growers and food businesses in response to inquiries relating to product development, processing, copacker contacts, public health guidelines and business and marketing opportunities.

Marketing beyond the region is supported through the MDAR organized MA Pavilion at the Summer Fancy Food Show. Over 60 Massachusetts food companies exhibited at the International Summer Fancy Food Show in New York City, in 2017, with over 35 in the MA pavilion which included several that originated in shared use kitchens. These entrepreneurial small- to medium-sized food businesses, an important component of job creation in the state’s food system, met new customers and developed sales from the 24,000 mostly independent retail buyers in attendance. This trade show has a reputation as the premier marketplace for value-added foods, and is attended by farm stand operators and retail businesses looking to add Massachusetts value-added products to their inventory.

An MDAR presence at the Local Specialty Crop and Local Food Trade Shows, organized by the Sustainable Business Network, also helped to connect buyers from supermarkets and institutions with Massachusetts value-added producers.

MDAR is a member of the MA Partnership for Food Safety Education and shared food safety resources through the network, website and at the New England Foodservice trade show.

MDAR was awarded a USDA Specialty Crops Block Grant in 2017 to provide technical assistance resources specific to product development including food safety training for value-added products. The Massachusetts Food Processors Resource Manual is an on-demand tool which includes food safety information, located on MDAR’s website. MDAR will work with a planning team of external specialty crop stakeholders to assess the Manual and update and expand as needed, including the integration of new regulations such as FSMA. Based on identified gaps and opportunities, MDAR will contract with a video production company to develop a series of high quality educational videos with an emphasis on food safety in adding value to specialty crops.

## FARM TO SCHOOL PROJECT

David Webber

From kindergarten to college, interest in serving locally grown foods in cafeterias is increasing in Massachusetts and throughout the northeast United States. Feeding locally grown foods to students can be a good way for food service directors to improve the nutritional value and taste of school meals, while supporting the local economy. Selling local products to schools can be profitable for Massachusetts growers who are looking for a new way to connect with local consumers.

The Massachusetts Farm to School Project, (MFTS) of which MDAR is a primary sponsor, provides technical assistance to Massachusetts farmers and schools as they attempt to find a good match. According to the USDA Farms to School Census, approximately 171 school districts reported they are participating in farm to school activities. This represents 828 schools and 422,072 students. Another 10% of the schools who responded reported they plan to start a farm to school initiative in the future.

In 2017, MFTS continued to provide individual and group technical assistance to farmers, institutions and distributors serving institutions. This included individual consultations to presentations at farmer focused meetings and conferences. In November 2017, MFTS held the 4<sup>th</sup> Biennial Massachusetts Farm to School Conference in Leominster, MA. This included a daylong conference of workshops, a producer/buyer tradeshow and exhibitors. Attended by nearly 400 farms to cafeteria advocates, topics included local foods procurement and promotion, experiential food and nutrition education, food, farm and nutrition policy, growing for the institutional market and local, state, and regional networking.



School year 2016-2017 represented the fourth year of the Harvest of the Month program. This program highlights a different locally grown item each month of the year. What began as a 6-month campaign targeting K-12 schools has now grown to all 12 months and was implemented in 109 public K-12 districts and 11 colleges, universities and independent schools.

A major emphasis was promotion of Harvest of the Month in summer food service programs, both those run by schools and by other summer sponsors such as Boys and Girls Clubs and the YMCA. Mass Farm to School staff also sought to deepen the educational resources provided by Harvest of the Month and encourage support of the program by school staff outside of the cafeteria.

The program has proven effective in increasing the volume of locally grown foods purchased by schools and education and celebration of local foods in schools. Harvest of the Month program surveys showed that 60% of respondents indicated the Harvest of the Month promotional efforts increased student selection of the featured crops. Seventy-seven percent of responding Food Service Directors reported that they worked with others in the school environment such as classroom teachers or school nurses to further promote the Harvest of the Month crops.

Harvest of the Month seeks to increase both the volume and variety of locally grown crops that institutions purchase. Seventy percent of respondents reported increasing the variety of locally grown products that they purchased and 80% of respondents said they purchased slightly or significantly more locally grown produce this year than last year.

MFTS established the Farm to School Network in 2016 and during 2017, MFTS supported the 10 person leadership team in building out the formal network structure, while recruiting members from across the state from various disciplines. Three working groups were established – policy, education and supply chain. Working group co-chairs were appointed in spring, 2017.

For more information:

- MA Farm to School Project: [massfarmtoschool.org](http://massfarmtoschool.org)
- National Farm to School Network: [farmtoschool.org](http://farmtoschool.org)

**FARMERS’ MARKET PROGRAM**

David Webber

The number of farmers markets decreased slightly to 240 in 2017. An additional 53 winter farmers markets were up and running over the 2017-2018 winter season, up 13% from the year before. Massachusetts Farmers’ Market Week was held the week first week of August in conjunction with National Farmers Market Week.

**Farmers’ Market Numbers**

Year	Number of Markets	Percent Growth	Number of Winter Market	Percent Growth
2004	101	9%	0	-
2005	114	13%	0	-
2006	126	11%	0	-
2007	139	10%	0	-
2008	167	20%	0	-
2009	203	22%	6	-
2010	233	15%	18	200%
2011	250	7%	35	94%
2012	254	2%	40	13%
2013	249	-2%	41	2.5%
2014	251	.50%	43	5%
2015	256	2%	43	0%
2016	247	-4%	47	9%
2017	240	-3%	53	13%

**Farmers’ Market Resources**

MDAR maintains a comprehensive list of farmers’ market resources on its website for consumers, market managers and farmers ([mass.gov/massgrown](http://mass.gov/massgrown)). A list of farmers’ markets with their days, times, and locations can be found along with a crop availability guide, shopping and produce storage tips, healthy recipes, and nutrition information.

A Farmers’ Market Managers Workshop was held in Sturbridge in conjunction with the Harvest New England Agricultural Marketing Conference and Trade Show. Co-sponsored by Massachusetts Farmers Markets, the Cooperative Development Institute, and Harvest New England, the workshop attracted nearly 100 market managers.

**Healthy Incentives Program: SNAP/EBT at farmers’ Markets/Direct Marketing Farmers**

Increasing access to farmers’ markets and farmers by SNAP participants continues to be a priority. The number of farmers’ markets accepting EBT/SNAP continues to grow from 153 in 2016 to 157 in 2017, while SNAP redemption at farmers’ markets and with farmers grew over 700%, from \$470,505 to \$3,774,429 largely due to the Healthy Incentives Program which began in April, 2017.

MDAR continues to collaborate with the Department of Transitional Assistance (DTA) on the Food Insecurity and Nutrition Incentive Grant Program with implementation of the statewide Healthy Incentives Program which began in April, 2017. The Healthy Incentive Program (HIP) matches SNAP recipients purchases on fruits and vegetables from farmers markets, farm stands, CSA’s and mobile markets and instantly applies the credit back to the participants’ EBT card, up to \$40, \$60 or \$80 month.

MDAR worked with DTA and other partners to train and on-board farmers to begin processing SNAP and HIP. Extensive technical assistance was provided. Regional SNAP sign up events were held to assist farmers in getting their SNAP retailer application and processing equipment. At these sign up events, USDA staff assisted farmers with completing the retailer application and farmers received their approval the very same day. Nearly 200 farmers began processing SNAP/HIP in 2017.

As a result of HIP, SNAP sales in 2017 increased 702% at agricultural points of sale to \$3,774,429.

**Growth in the Number of farmers’ Markets accepting SNAP and SNAP Sales\***

Year	Number of Markets	Total SNAP Sales
2007	9	\$4,543
2008	18	\$8,447
2009	30	\$19,119
2010	58	\$122,685
2011	90	\$221,707
2012	110	\$312,835
2013	126	\$336,049
2014	134	\$366,226
2015	143	\$384,239
2016	153	\$470,505
2017	157	\$3,774,429

\*Includes direct marketing farmers

**Boston Public Market and the Public Market Commission**

The Boston Public Market officially opened to the public on July 30, 2015. Located at 100 Hanover Street in Boston, in a building owned by the Department of Transportation (MassDOT), the market includes nearly 40 permanent vendors which feature foods grown and produced from Massachusetts and New England and a 3,200 square foot demonstration kitchen. In 2017, total sales at the market were \$14,085,946.81 with 1,411,286 transactions and 2.4 million visitors.

The Commission’s role is to: Define the mission and vision of a public market in downtown Boston; Confer with participants and parties from the public and private sector involved with the planning, financing, design, and construction of said public market; Work with relevant public and private sector parties to write guidelines for an eventual market operator; Work with the appropriate state agencies to advertise for, and select, a market operator; Define the terms of a lease between MassDOT and the operator, subject to approval of MassDOT; and Receive and review quarterly updates from the operator on the financial health of the market, its adherence to the mission and other issues as necessary.

The Commission met in January, April and October of 2017. The Public Market Commission is chaired by MDAR Commissioner John Lebeaux and 8 other members from the following agencies and organizations: Executive Office for Administration and Finance; Executive Office of Energy and Environmental Affairs; The Department of Transportation; State Senate member; State House member; City of Boston Appointee, Boston Planning and Development Agency and Rose Kennedy Greenway Conservancy.

# ORGANIC COST SHARE PROGRAM

Michael Rock, Fiscal Division | Mary Jordan, Agricultural Markets Division

The Massachusetts Department of Agricultural Resources (MDAR) Marketing and Finance Divisions collaborated to manage this year’s USDA Organic Cost Share Reimbursement Program. The Department received a total amount of \$115,820 in Organic Cost Share funds and 34 handlers and 85 producers received cost share funds for FY 17.

Agency staff prepared the Organic Cost Share application and packets include pertinent state required forms for timely processing. Outreach included posting the application package on the agency’s website and working with USDA accredited certifying agents to notify potential applicants. Agency staff worked closely with applicants to resolve any incomplete applications.

Industry outreach began in May, 2017. An article promoting the Organic Cost Share opportunity was included in the Department’s newsletters that are emailed to approximately 3,500 industry members on a bi-monthly basis. The Department website that focuses on industry information has a page dedicated to the Organic Cost Share Reimbursement program (see website which includes the application package: <http://www.mass.gov/eea/agencies/agr/markets/organic-cost-share-program-generic.html>.)

Organic certifiers are very supportive in promoting the program to organic certified producers and handlers. During the certification process, certifiers hand out application packages and encourage submitting the packages in a timely manner.

The Department attends the Massachusetts NOFA meeting each year and staffs an informational table which contains information on the Organic Cost Share Reimbursement program. One meeting is the winter statewide conference and the other is the summer weekend workshop. Over 2,000 attendees had access to picking up an organic cost share application package at both of these venues. Throughout the application period, information is distributed at other various meetings including Fruit and Vegetable conferences as well as other industry conferences/events.

# MASSACHUSETTS GROWN & FRESHER INITIATIVES

Richard LeBlanc



**Agritourism Signage Program:** In FY2017, we had one new application for MDAR’s Agricultural Directional Signage Program. It was for Paradise Hill Farm in Westport (MassDOT District 5). The farm established two ag-tourism highway signs on Route 88. This now brings us to over 40 signs across the Commonwealth that helps direct the public our rural farms.

**Social Media:** We continue to use social media tools to enhance our website content by disseminating MDAR grants, programs and meetings. We also use them to spotlight farms and the agriculture industry across the Commonwealth. Social media allows for targeted outreach to our core audiences by pushing content on a much more frequent basis. We use the handle @MassDeptAgr on Twitter and Facebook. In 2017, we started an Instagram account which has quickly amassed a devout following and continues to grow at an exponential rate as we use the platform to showcase the aesthetic beauty of food and agriculture unique to Massachusetts. The @Massgrown accounts we use on Twitter and Instagram are primarily geared towards our consumer base and used to focus on culinary and agriculture events. All events are also listed on our calendar at [www.mass.gov/agr/massgrown/calendar.htm](http://www.mass.gov/agr/massgrown/calendar.htm).

**The Farm and Market Report:** MDAR's bimonthly newsletter which includes the Commissioner's Column, program and grant updates, workshop and educational updates, USDA News, along with a Calendar and Classified section. It is distributed via email to the agricultural community in Massachusetts and has over 7500 subscribers. We encourage anyone looking for Massachusetts news related to agriculture, to get subscribed by sending request to Rick LeBlanc at [Richard.LeBlanc@state.ma.us](mailto:Richard.LeBlanc@state.ma.us).

“MassGrown & Fresher” Promotes Specialty Crops – Specialty Crop Grant: In 2017, we finished a Specialty Crops Block Grant Block Grant – three year project that focused on promoting “Massachusetts grown and fresher” at industry and consumer related conferences.



Funding assisted us to expand our outreach to professional trade audiences, including conferences at the Boston Concierge Association, the MA Dietetic Conference, and the 2017 MA Municipal Conference. The added consumer shows included the 10<sup>th</sup> annual 2017 Boston Green Fest and the 2017 North Quabbin Garlic and Arts Festival. 40k posters were designed and produced. 750 maple syrup samples, 1200 apples were purchased as well as 1000 dried cranberries were donated to the project. Samples and posters were given out at each of the shows. We even had new MDAR honeybee pollinator tattoos as an added giveaway at the booths.

Another aspect of the project expanded in 2017 with additional funding and scope by promoting Specialty Crops via poster advertisements on the Boston Massachusetts Bay Transportation Authority (MBTA) commuter rail network. We contracted with MBTA to produce and install 420 poster cards on trains throughout the Boston Commuter rail system in September, 2017. We reached approximately 714,660 impressions from riders for the month of September. We looked at our website to see if we could see a spike that month in comparison to last year (when there was no advertisement). Using Google analytics, we saw an increase to [www.Mass.gov/Massgrown](http://www.Mass.gov/Massgrown) from 715 unique views to 1384 for the month of Sept. 2017, for a 94% increase.



New Posters: The Grant allowed us to produce these new posters to be given out to growers and producers, as well as the public at the various fairs and consumer shows throughout the year. Besides the shows listed above, we also attended many other consumer shows with materials provided in this

grant: The Boston Flower Show (est. attendance 15k), The Big E (over 1.5 million), as well as regional fairs throughout the state. We have added over 1000 new consumer emails that now will receive seasonal “Massgrown” news which includes seasonal crop updates, and event highlights.

**SPECIALTY CROP BLOCK GRANT PROGRAM**

The purpose of the Specialty Crop Block Grant Program (SCBGP) is to solely enhance the competitiveness of specialty crops. Specialty crops are defined as “fruits, vegetables, tree nuts, dried fruits, horticulture, and nursery crops (including floriculture). The agency, commission, or department responsible for agriculture within any of the 50 States is eligible to apply directly to the U.S. Department of Agriculture for grant funds.

SCBGP funds may be used for a specialty crop project lasting up to three years. Concept Paper applications are considered on a competitive basis and ranked by an internal review panel. Selected Concept Paper applications will be invited to submit a formal proposal and will be ranked. Selected formal proposals will be included in the Massachusetts Specialty Crop State Plan and reviewed by the USDA.

Projects must impact and produce measurable outcomes for the specialty crop industry and/or the public, rather than a single organization, institution or individual. MDAR’s funding priorities include expanding local, regional and international markets and distribution channels for specialty crops, as well as facilitating education and marketing.

In 2017, the U.S. Department of Agriculture awarded MDAR a total of \$342,330.36 to 15 grant awardees across the Commonwealth, funding various projects.

**Grant Awardees**

The following are the grant recipients for 2017.

**Cape Cod Cranberry Growers’ Association – Carver, MA**

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The Cape Cod Cranberry Growers’ Association proposes to increase awareness and consumption of Massachusetts Cranberries through a series of strategic components that will leverage the value of this native fruit while quantifying the value of this region’s heirloom cranberry varieties. Marketing and promotional techniques will target, engage and educate cranberry consumers in Massachusetts on how to use fresh fruit and the marketing potential that exists for selling heirloom cranberry products in the northeast.

**Ground Work Lawrence – Lawrence, MA**

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Ground Work Lawrence shall increase the consumption of specialty crops by expanding efforts, harnessing new resources and opportunities for specialty crop education and sales in Greater Lawrence. They will increase the consumption of specialty crops through new staff capacity to plant and harvest specialty crops at Costello Urban Farm which will then be sold at the Groundwork Lawrence farmers’ markets. These tasks will increase visibility, competitiveness and consumption of specialty crops in Lawrence and encourage new farmers to join and benefit from increased sales.

**Lettuce Be Local – Sterling, MA**

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Lettuce Be Local will increase the safe and secure distribution of locally-grown specialty crops by expanding accessibility and knowledge of local food through education, aggregation and transportation. This project will further develop the promotion of specialty crops by connecting existing farm production to new market opportunities.

**Mass Agriculture in the Classroom – Marlborough, MA**

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Mass Agriculture in the Classroom will create a model with the Auburn Public Schools that expands access to and consumption of specialty crops required in the National School Lunch Program. The project will address the needs of the whole child through Social and Emotional Learning by teaming up with educators and school nutrition professionals.

**Mass Farm to School Project – Amherst, MA**

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Massachusetts Farm to School will increase the competitiveness of locally grown specialty crops by supporting local specialty crop procurement, promotion, and education at early education and care sites throughout the Commonwealth. The project will encourage the preference for, and facilitate sales of, locally grown specialty crops by introducing and promoting these products within early education and care (EEC) settings. These settings include preschools, child care centers, family child care homes, Head Start/Early Head Start, and early education programs within K - 12 school districts.

**Massachusetts Farm Wineries and Growers’ Association – Ludlow, MA**

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Massachusetts Farm Wineries and Growers’ Association will focus on the optimization of Massachusetts wine production, and the optimization of the Tasting Room experience, where consumers interact directly with winery owners. Develop educational components to increase farm winery knowledge to entice consumers to "Fall in Love with Massachusetts Wine" and to experience a meaningful connection to local agriculture and community through the tasting and purchase of Massachusetts wines.

**Massachusetts Flower Growers Association – Bedford, MA**

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Massachusetts Flower Growers Association will focus and grow the number of non- gardeners, beginners and young children populations to increase sales of specialty crops.

**Northeast Organic Farming Association – Barre, MA**

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Northeast Organic Farming Association will build a reliable, thorough, affordable and ultimately self-funding consulting service for specialty crops farmers, gardeners, and urban growers of Massachusetts, enhancing the competitiveness of specialty crop production while also building soil health long-term throughout the state.

**Nuestra Raices, Inc. – Holyoke, MA**

Nuestras Races will boost consumption of and access to healthy, locally-grown specialty crops for low-income Latino residents via a Mobile Market, offering produce at affordable prices in locations convenient to the residents, while benefitting farmers with increased sales and market access.

**Regional Environmental Council – Worcester, MA**

The Regional Environmental Council will increase access to local foods through farmers markets (including a mobile market) in Worcester, MA and increase produce sales and number of customers by promoting the new Healthy Incentives Program (HIP).

**Sustainable Business Network of Massachusetts – Cambridge, MA**

This program aims to overcome barriers to specialty crop integration by improving the viability, sustainability, and profitability of the Massachusetts and New England specialty crop food industry. The intention is to enhance the competitiveness of Massachusetts and New England specialty crop products by eliminating barriers faced by specialty crop producers, fostering an environment for the economic growth of the specialty crop industry.

**Third Sector New England/New Entry Sustainable Farming – Lowell, MA**

New Entry Sustainable Farming Project’s specialty crop education project aims to work with small and beginning farmers to encourage crop specialization and to scale production quantities of specialty crops for wholesale markets that require higher volumes, consistency, and food safety compliance. We will research and focus on up to five unique specialty crops in demand by local farm-to-institution and wholesale buyers to develop a comprehensive crop production manual for these crops.

**University of Massachusetts, Amherst – Amherst, MA**

Research the biological control of plant parasitic nematodes in golf greens with natural enemies. Positive results may also facilitate the expansion of the use of Pasteuria for nematode control in other crops where they are troublesome, particularly vegetables and small fruits.

**MDAR Technical Resource – Boston, MA**

The project will increase specialty crops by providing technical assistance resources specific to product development including food safety training for value-added products. Massachusetts Department of Agriculture will work with a planning team of external specialty crop stakeholders to assess the Manual and update and expand as needed, including the integration of new regulations such as the Food Safety Modernization Act (“FSMA”).

**MDAR GAP/GHP– Boston, MA**

Massachusetts Department of Agriculture will provide direct assistance to Massachusetts Specialty Crop Growers by reimbursing the costs associated with the Good Agricultural Practices/Good Handling Practices (GAP/GHP) or Harmonized audits. The proposed initiative would lessen the financial burden of the grower and would allow these farms to continue to access those channels.



# DIVISION OF AGRICULTURAL CONSERVATION AND TECHNICAL ASSISTANCE (DACTA)

**Division Director**  
Gerard Kennedy

## AGRICULTURAL BUSINESS TRAINING PROGRAM (ABTP)

MDAR offers agricultural business training courses throughout the state to Massachusetts farmers at various stages of business development. The courses are based on established curriculum and taught by experienced instructors that are familiar with the challenges and opportunities in the agricultural field, providing guidance and resources to help farm operators be successful. Courses are scheduled at various locations across the state based on interest.

In 2017, MDAR offered the following courses:

Exploring the Small Farm Dream 5-session course developed by the New England Small Farm Institute for those exploring or planning to start a farm was in the winter of 2017 at Bristol Community College in Fall River to 15 participants representing 11 farm enterprises. The course provides a structure for each participant to evaluate whether agricultural entrepreneurship is right for them, and to help determine whether their small farm dream idea would be feasible for them.

Tilling the Soil of Opportunity 10-session business planning course was offered in the winter of 2017 in Amherst to 14 participants representing 9 established farms. Course participants received group and individual instruction to improve their business skills, including marketing and financial planning, and developed a comprehensive business plan for their farm operation. The course also provided class networking and discussion, guest speakers, farm site visits by the instructor, and additional technical assistance based on identified needs.

## AGRICULTURAL ENVIRONMENTAL ENHANCEMENT PROGRAM (AEEP)

Laura Maul

AEEP is a voluntary program that provides financial support to agricultural operations to help implement conservation practices intended to protect the Commonwealth’s natural resources by the prevention or mitigation of pollution that may arise from agricultural practices. Since 1999, the program has funded 596 projects statewide that improve water quality, conserve water, reduce greenhouse gas emissions, and conserve energy. Agricultural operations have received over \$7 million dollars to help them address environmental concerns on their farms. In fiscal year 2017, 15 projects were funded totaling \$250,000 in awards. An additional round of funding was released in fiscal year 2017 to help agricultural operations deal with an unprecedented drought that occurred during the year. An additional 18 projects totaling \$250,000 in funding were awarded for just water conservation practices. In fiscal year 2018, 23 projects were funded totaling \$350,000 in awards. Projects are selected based on their potential to impact the most sensitive resources, including drinking water supplies, wetlands, Department of Environmental Protection (DEP) priority water bodies, and areas of environmental concern.

A strength of AEEP is its ability to complement federal funding from the Natural Resource Conservation Service (NRCS) programs for environmental practices on farms, enabling the completion of, for example, a costly manure management structure that the farmer otherwise could not afford to complete. Examples of funded projects include the installation of manure management systems, pesticide storage facilities, fencing to keep livestock out of wetlands, energy efficient pumps with low emissions, irrigation, automated irrigation, and water control structures.

**AGRICULTURAL FOOD SAFETY IMPROVEMENT PROGRAM (AFSIP)**

Laura Maul

The Agricultural Food Safety Improvement Program (AFSIP) is a program which was created to help agricultural operations address food safety risks and work towards compliance with food safety regulations and audit verifications. Through the implementation of food safety measures farmers can upgrade their practices in order to maintain or increase their market access, to meet regulatory requirements, and in doing so, work towards protecting public health. Participants selected to participate in the program are reimbursed up to \$25,000 or 75% of their total project costs.

For fiscal year 2017 eligibility was open to produce operations and aquaculture operations. Some examples of projects in the produce category include wildlife fencing, packing shed upgrades, produce washing equipment, field harvest systems, hand washing sinks, and drainage systems. Some examples of projects in the aquaculture category include ice machines, cold storage, and insulated vats. For fiscal year 2017, the program funded 24 projects totaling \$200,000 in awards (12 Aquaculture \$70,548 – 12 Produce \$129,452). In fiscal year 2018 eligibility was limited to just produce operations and 24 projects were funded totaling \$200,000 in awards.

**MATCHING ENTERPRISE GRANTS FOR AGRICULTURE (MEGA)**

The Department initiated the MEGA Program in 2010 in response to the needs of new and beginning farmers in Massachusetts. The program is modeled after the Department’s Farm Viability program. The Program offers business and technical assistance to participating farm operators as well as one to one matching grants of up to \$10,000 per farm on a cost reimbursement basis. To be eligible, farmers must own businesses that have been in operation between one and five years producing and selling agricultural products and be developing their farms into commercially viable operations. Farmers selected for the program participate in a business planning process to narrow down the best use of the grant and matching funds for farm equipment, infrastructure or other or capital improvements on the farm.

In 2017, MEGA provided \$53,376 in total grants of up to \$10,000 per farm and \$19,700 in total technical assistance to 6 participating farms. Since MEGA began in 2010, \$542,596 in total grants (an average of \$8,613 per farm) and \$252,264 of technical assistance (an average of \$4,004 per farm) have been provided to 63 diverse beginning farms through 7 rounds of the program.

**AGRICULTURAL PRESERVATION RESTRICTION PROGRAM (APR)**

Ron Hall

The Agricultural Preservation Restriction Program (APR) preserves and protects agricultural land, including soils, as a finite natural resource, and prevents them from being built upon for non-agricultural purposes or used for any activity detrimental to agriculture. The program is designed to keep APR land values at a level that can be supported by the land’s agricultural uses and potential.

During 2017, the APR program protected 12 farm projects covering over 507.864 acres. This raises the total farm properties enrolled to 915 and the total farmland protected to 73,473 acres. To acquire these restrictions, the program invested \$4,211,462.50 in state bond funding that was matched by another \$2,128,000 in reimbursements from the Agricultural Conservation Easement Program (ACEP), Agricultural Land Easement (ALE).

**APR IMPROVEMENT PROGRAM (AIP)**

The purpose of the APR Improvement Program (AIP) is to help sustain active commercial farming on land that has already been protected through the Department’s Agricultural Preservation Restriction (APR) Program. AIP provides technical assistance and business analysis to help improve the productivity and profitability of participating farms with the goal of enhancing the significance of APR farm operations and their contribution to the state’s agricultural industry. Farmers selected for the program participate in a business planning process to confirm proposed farm improvements and upon completion become eligible for grant funds. AIP grant funding must be spent on farm infrastructure - capital projects to build or improve farm buildings or resource improvements that will help maintain or enhance the farm property.

In 2017, \$375,000 in total grants (an average of \$53,571 per farm) and \$27,361 in planning and technical assistance (an average of \$3,909 per farm) were provided to 7 participating AIP farms from across the state with a combined total of 1,128 acres of APR land.

Since the program began in 2009, AIP has provided a total of \$4,825,000 in grant funding and \$432,387 of planning and technical assistance through 8 rounds of the program to 72 participating Massachusetts farms. These farms own a combined total of 10,321 acres of farmland that has been permanently protected from development under APRs.

**STEWARDSHIP ASSISTANCE AND RESTORATION ON APRS (SARA)**

The purpose of the Stewardship Assistance and Restoration on APRs (SARA) program, which was initiated in 2016, is to improve the overall utilization of APR land resources for commercial agriculture. SARA provides grant funding of up to \$25,000 per farm, with a 15% required cash match, for identified improvements that will help restore or enhance protected resources on an APR farm property. The Program assists participants with conducting activities that will enhance the continued use of the agricultural resource, which may include but are not limited to: improving soil health; stabilizing soil loss; reactivating cropland use that had been negatively impacted by erosion, flooding, natural disasters or inactivity.

In 2017, 8 out of 31 respondents that applied to 2 rounds of SARA were selected for participation and received a total of \$143,355 in grants. These funds helped to clear field edges, remove stumps and reseed cropland, clear out drainage ditches, restore pasture, pick stones and restore cropland, repair a farm access road, and make drainage improvements on APR farms.

**AGRICULTURAL CLIMATE RESILIENCY & EFFICIENCIES PROGRAM (ACRE)**

Laura Maul

A new program in Fiscal Year 2018 The Massachusetts Department of Agricultural Resources invited responses from Massachusetts farmers who raise and sell agricultural products who wanted to participate in the Agricultural Climate Resiliency & Efficiencies (ACRE) Program. This program provides reimbursement funding to agricultural operations for the implementation of practices that address the agricultural sector’s vulnerability to climate change, improve economic resiliency and advance the general goals identified in the Massachusetts Local Action Food Plan. The ACRE program awarded 16 projects totaling \$500,000 in awards.

**AGRICULTURAL COMPOSTING PROGRAM**

Sean Bowen

MDAR’s Agricultural Composting Program (330 CMR 25.00) encourages and supports composting on farms by providing technical assistance to compost operators as well as an Agricultural Composting Registration process that allows qualifying farms to register their operations with MDAR under an agricultural waste composting exemption in MassDEP's Site Assignment Regulations for Solid Waste Facilities (310 CMR 16.00). Under that exemption, any farm that wishes to compost organic materials other than those that are generated on their own farms, must register their operation with MDAR.

Agricultural Composting is defined in 330 CMR 25.02 as: “The composting of agricultural wastes and other compostable materials on an agricultural unit resulting in stabilized compost products for agricultural and horticultural uses.” In addition to agricultural wastes, registered composters may utilize the following compostable materials, provided the operation complies with policies of the Department of Agricultural Resources:

- Leaf and yard waste
- Wood wastes
- Paper and cardboard
- Clean compostable (i.e. thin) shells
- Non-agricultural sources of manures and animal bedding materials
- Vegetative material
- Food material

The program is responsible for registering new agricultural compost sites as well as renewing the registration of existing sites annually. During 2017, MDAR registered 59 Agricultural Compost Sites, reduced from 63 the prior year. Enforcement action was taken on two of these sites removing their registration, and two were registered with MassDEP, as the activities conducted on-site were more reflective of commercial composting than agricultural composting. More than 70 site visits of registered composters and prospective farms wishing to engage in agricultural composting were conducted during the year to address concerns, provide technical assistance and troubleshoot the operations to improve composting.

**AQUACULTURE PROGRAM**

Sean Bowen

The cultivation of marine and freshwater organisms is a very diverse segment of the Massachusetts agriculture industry. The Commonwealth’s aquaculture industry, which includes culture of both marine and freshwater organisms, produces aquatic species for food, education, research, ornamental, bait and sport fishing activities, including 7 species of shellfish and at least 10 species of finfish – freshwater and marine - that are cultured experimentally and commercially. There has also been some small scale culture of marine macro-algae (seaweed), which has shown promise, and may help to diversify aquatic farms.

One of the largest segments of the state’s aquaculture industry is the culture of bivalve shellfish. 360 licensed shellfish farms operate on over 1,200 acres of tidal land in the Commonwealth. By far, the largest farm raised shellfish crop is the Eastern oyster, however other species are grown, such as hard-shell clams, bay scallops, softshell clams, blue mussels, and surf clams.

The shellfish aquaculture bears a large responsibility for assuring the safety of their aquatic crops, which is subject to unique challenges, such as naturally occurring pathogens and algae blooms. Accordingly, the industry is subject to ongoing stringent regulation by state and federal regulators. Notwithstanding these challenges, the sector remains strong, and growing - the most recent studies have shown the value of the shellfish aquaculture industry in Massachusetts to be in excess of \$25 Million.

MDAR supports three Aquaculture Centers which provide technical support, marketing assistance and promotion, and education to the industry and the public. The Northeast MA Aquaculture Center (NEMAC) is located within Salem State University, Southeast MA Aquaculture Center (SEMAC), located within Barnstable County Cooperative Extension, and the Western MA Center for Sustainable Aquaculture (WMCSA) operated through UMASS Amherst. During FY17, a total of \$75,000 was provided to the Centers to support the Massachusetts aquaculture industry.

The Food Safety and Aquaculture Specialist provides a variety of services to support the promotion and development of Massachusetts aquaculture. The integration of food safety and aquaculture within DACTA enables MDAR to assist the industry by facilitating regulatory compliance, offering permitting assistance, and affording more effective inter-departmental policy discussion.

**AGRICULTURAL ENERGY GRANT (AG ENERGY) PROGRAMS**

Gerry Palano

**Introduction**

Since 2009, the Massachusetts Department of Agricultural Resources (MDAR) annually requests Massachusetts agricultural operations to submit proposals seeking funding for agricultural energy projects under our Agricultural Energy (AgEnergy) Grant Program. This is in an effort to improve energy efficiency and to facilitate adoption of alternative clean energy technologies in order that farms can become more sustainable and the Commonwealth can maximize the environmental and economic benefits from these technologies. By implementing these projects, the agricultural operation will help farms become more sustainable while contributing to the goals of: the MA Food Systems Plan; MA Energy Efficiency and Renewable Energy Implementation; and the climate change MA Global Warming Solutions Act. Since inception our annual AgEnergy Grant has now helped fund over 240 farms for a variety of energy efficiency and renewable energy projects, providing total funding of over \$3.8 million dollars toward total project construction costs, achieving over \$1,000,000 in either annual energy savings or energy generation.

Of significance in FY2017 was once again supplemental funding of \$1 million dollars from the MA Department of Energy Resources (DOER) for MDAR’s energy grant programs from DOER’s Alternate Compliance Payment fund. This was accomplished through a 2-year inter-agency service agreement, extending through FY2018. This funding was well received by our agricultural community, enabling MDAR to expand the existing annual AgEnergy Grant Program in both per applicant amounts and in total grants awarded, as well as creating a new Special Projects Grant, intending to provide funding for agricultural energy projects that would typically require higher capital cost but could potentially yield greater savings and/or positive agricultural impacts. All this was done in an effort to improve the farm’s energy efficiency and to facilitate adoption of less conventional, alternative clean energy technology applications, and to advance technologies that can be replicated at other agricultural operations in Massachusetts. These projects also contribute to the goals stated above.

**AgEnergy Traditional Grant Program FY2017**

In FY2017, the Baker-Polito Administration awarded 28 AgEnergy Traditional grants through the Massachusetts Department of Agricultural Resources’ (DAR) Agricultural Energy Grant Program (AgEnergy) totaling \$467,659 to Massachusetts farmers to implement renewable energy systems and improve energy efficiency on farms.

Funding was provided to farms in the towns of Acton, Amherst, Bourne. Conway, Deerfield, Edgartown, Foxboro, Hampden, Hatfield, Mendon, Montague, Newbury, Oak Bluffs, Oakham, Otis, Pepperell, Shelburne, Shelburne Falls, South Dartmouth, South Hamilton, Sunderland, Topsfield, West Barnstable, West Bridgewater, Westhampton, Westport and Worthington.

Grants funded a combination of energy efficiency and renewable energy projects including: a variety of roof-mounted, ground-mounted and dual-axis tracking ground-mounted photovoltaic systems for a number of farm operations including vegetable & fruit, goat and cow dairy cheese-making, vegetable & horticultural, livestock, aquaculture and vineyard operations. Additionally, a unique aquaculture operation will utilize tidal power in lieu of conventional electric to power its pumping needs. And a farm stand will install off-the-grid solar pole lighting with batteries in lieu of conventional utility pole lighting.

As well a number of maple syrup operations will become more efficient by incorporating new reverse osmosis, evaporators, pre-heaters, and variable speed drive equipment for their operations, while a year round greens, herbs and edible flower farm will install an airside economizer for their walk-in refrigeration system to minimize winter time electric compressor use.

Total estimated project construction costs for the recommended projects are \$1.5 million dollars. Total annual utility energy savings or generation are calculated to be \$104,555, including 377,202 kWhs and 146 cords of wood, 290.34 kW of capacity of new, on-farm use solar PV installations.

**AgEnergy Traditional Grant Program FY2018**

In FY2018, the Baker-Polito Administration awarded 29 grants totaling \$577,157 to Massachusetts farmers through the Massachusetts Department of Agricultural Resources’ (DAR) Agricultural Energy Grant Program (AgEnergy) to implement renewable energy systems and improve energy efficiency on farms. The awarded farms are projected to save over \$180,000 annually and reduce greenhouse gas emissions (GHGs) by over 600 tons each year.

In partnership with the MA Department of Energy Resources (DOER), AgEnergy Grant funding was provided to farms in the towns of Hardwick, Lanesboro, Shelburne Falls, Chesterfield, West Wareham, Lunenburg, Marstons Mills, Shelburne, Deerfield, Dracut, East Sandwich, Westminster, Easthampton, Carver, Shrewsbury, Hadley, Rehoboth, West Brookfield, Upton, Sterling, Saugus, Berlin, Warwick and Conway.

Grants will fund a combination of energy efficiency and renewable energy projects including: a variety of roof-mounted and ground-mounted photovoltaic systems for a number of farm operations including vegetable & fruit, cow dairy cheese-making, vegetable & horticultural, year-round greenhouse, cut flowers, livestock, aquaculture, malting and vineyard operations.

As well several maple syrup operations will become more efficient by incorporating new reverse osmosis, evaporators, pre-heaters and steam hoods for their operations, while a farm malting operation will incorporate variable speed drives into their operation, a hog farm

will well insulate a piglet stall with heating pads in lieu of heat lamps, and greenhouse operations installing new higher efficiency heating systems and higher efficiency glazing.

The twenty-nine grants recommended for funding total estimated project construction costs were over \$4 million dollars. Total annual utility energy savings or generation are calculated to be \$181,050, including 1,358,079 kWhs, 4,100 therms of natural gas, 250 gallons of fuel oil and 19.4 cords of wood. 290.34 kW of capacity of new, on-farm use solar PV installations. 1.235 MW of new solar PV capacity will be brought on line. Total annual greenhouse gas (GHGs) emission reductions will total 605 tons CO2 equivalent.

**AgEnergy Special Projects Grant FY2017**

In our first year with the Special Projects Grant, the Baker-Polito Administration awarded 11 grants totaling \$350,000 to Massachusetts farmers to improve energy efficiency and implement renewable energy systems on farms. Funding was provided to farms in the towns of Amherst, Attleboro, Deerfield, Dracut, Granville, Hadley, Holland, Lincoln, New Braintree, Oakham and Rutland.

The Special Projects Grant Program, a collaboration between the MA Department of Energy Resources (DOER) and the MA Department of Agricultural Resources (MDAR), intends to provide funding for agricultural energy projects that would typically require higher capital cost but could potentially yield greater savings and/or positive agricultural impacts in an effort to improve the farm’s energy efficiency and to facilitate adoption of less conventional, alternative clean energy technology applications. By implementing these projects, the agricultural operation will help farms become more sustainable while contributing to the goals of: the MA Food Systems Plan; MA Energy Efficiency and Renewable Energy Implementation; and the MA Global Warming Solutions Act; and to advance technologies that can be replicated at other agricultural operations in Massachusetts.

Six (6) categories of project technologies were defined in the RFR in collaboration with DOER for applicants to select from in order to participate. Each category had a respective maximum reimbursable funding amount for the cost of materials and labor necessary for the installation of their energy efficiency and/or renewable energy project. Applicants were required to provide either a cash or in-kind cost match to the project. The six categories advertised were:

- 1. Heat recovery for anaerobic digester (AD) - maximum grant per applicant - \$50,000

New high efficiency, single- or multi-temperature level walk-in coolers - maximum grant per applicant - \$25,000

- 3. Dual-use of land solar PV – maximum grant per applicant – \$100,000
- 4. Zero net energy greenhouse projects – maximum grant per applicant - \$75,000
- 5. Super-efficient new building - maximum grant per applicant - \$75,000

Commercial-scale, high efficiency, and renewable energy urban agriculture greenhouses- maximum grant per applicant - \$100,000

Grants will predominantly fund energy efficiency projects as well as a zero net energy greenhouse installation. The energy efficiency projects include: a.) heat recovery systems to be installed on three (3) anaerobic digester operations at three (3) separate farms, to recover waste heat from the system and, through heat exchangers, supply hot water to heat a number of buildings on or adjacent to the farms. The recovered hot water will be integrated within each of the building’s existing fossil fuel fired heating systems, eliminating the use of fossil fuels. As importantly, these heat recovery projects will result in an overall increased efficiency for the anaerobic digester systems, effectively utilizing more of the anaerobic digester’s biogas production; and b.) a number of new, high efficiency walk-in coolers, freezers and combination walk-in coolers/freezers to be installed at multiple farms, typically replacing numbers of smaller, dated, chest freezers and refrigerators, resulting in more energy efficient and centralized refrigeration storage, helping the farms to become more sustainable in the near and long term.

One grant will also be provided for a zero net energy greenhouse project for a year round diversified livestock and vegetable agricultural operation that is a safe-haven for recovering addicts and the chronically homeless. The project is proposed to be built into the side of a hill and against an existing workshop, to be wood framed and super insulated on end walls, and to be served by roof-mounted solar PV with battery storage for all electrical needs, and a compost heat recovery system with a wood boiler back-up for all

heating and hot water needs. The project will benefit the farm allowing them to develop a winter CSA and participate in winter's farmer's markets, increase annual food production, sales and seed germination, and provide a productive outlet for worker residents during the winter months, and serve as a community engagement centerpiece.

PV with battery storage for all electrical needs, and a compost heat recovery system with a wood boiler back-up for all heating and hot water needs. The project will benefit the farm allowing them to develop a winter CSA and participate in winter's farmer's markets, increase annual food production, sales and seed germination, and provide a productive outlet for worker residents during the winter months, and serve as a community engagement centerpiece.

The eleven (11) grants recommended for funding for total estimated project construction costs were \$788,105. Total annual utility energy savings or generation is projected to be \$79,012 including almost 70,000 kWhs and over 27,750 gallons of oil and propane.

**AgEnergy Special Projects Grant FY2018**

In the second year for the AgEnergy Special Projects Program, nine (9) projects were funded, including for the first time two co-location solar PV projects, otherwise known as dual use of land. This technology emphasizes optimization of both farm land use for crops, grazing, etc. and energy generation, whereby solar PV panels are mounted high and spread apart enough to allow for adequate sunlight penetration for continuous crop production and human labor and farm equipment usage beneath the panels. One project will be for a vegetable farm operation; the other a creative use of co-location to support a fresh water raceway and tank production aquaculture system.

Other Special Projects are for zero net energy structures and centralized walk-in coolers/freezers.

For FY2018 the nine (9) grants recommended for funding were for a total of \$331,102. Five (5) projects were for walk-in coolers, two (2) were for zero net energy structures, and two (2) were for solar PV co-location projects (dual use of land). Total estimated project construction costs for the recommended projects are \$720,143. Total annual utility energy savings or generation is projected to be over 160,000 kWhs with associated greenhouse gas emission reductions of over 60 tons CO2 equivalent annually.

The same six (6) categories of project technologies were defined in the RFR in collaboration with DOER as in the program's first year defined above.

**MASSACHUSETTS FARM ENERGY PROGRAM (MFEP)**

MFEP is a full-service technical assistance program helping over 700 agricultural producers across all agricultural sectors for the past ten years. These projects range from simple lighting efficiency upgrades to commercial-scale solar photovoltaic systems, helping to improve the viability of agricultural businesses across the state.

In 2017, MFEP served more than 75 Massachusetts farms with technical and financial assistance, and partnered with federal and state agencies, public utilities, and nonprofits to develop and complete 33 farm energy projects throughout the state. MFEP also helped 36 farms secure targeted audits or access public utility assessments that outline recommendations, payback periods, and fulfill funding requirements, providing essential information for farm business decision-making.

Projects installed in 2017 resulted in annual savings of over 660,000 kWh of electricity, and more than 500 tons of CO2. Thirteen solar photovoltaic projects completed in 2018 are generating over 270,000 kWh of electricity annually.

Energy efficiency improvements installed at farms ranged from energy efficient evaporators and reverse osmosis systems for maple producers, to variable frequency drive motors for dairies, to efficient refrigeration for fruit and vegetable producers.

MFEP leveraged \$155,040 in federal and ratepayer funds and committed \$346,898 in MDAR incentives (including \$29,819 in MFEP funds) to energy efficiency projects in 2017. The farm energy projects for 2017 resulted in annual energy savings of approximately \$130,000, helping farms create and maintain jobs and reinvest savings into the farming operation and local economy.



In 2017 MFEP also matched MDAR funds with a USDA Rural Business Enterprise grant of \$22,666 and utilized funds from BPRC&D to pay for audits and projects. CET was also awarded a grant from the MassCEC to promote solar hot water, and MFEP expects a portion of this grant to support dairy farms across the state.

MFEP staff also provided one-on-one mentoring to eleven farms preparing to submit projects for MDAR’s Agricultural Energy Grant Program and 24 submitting to USDA REAP – resulting in several highly competitive grant awards. Staff also presented information on completing these applications to farms via webinar and distributed a bi-monthly newsletter. MFEP also hosted a media event, participated in a panel at the Harvest New England Agricultural Marketing Conference, and presented about the program at the Green Your Bottom Line Workshop and Greater Quabbin Food Alliance.

**FARM VIABILITY ENHANCEMENT PROGRAM (FVEP)**

Craig Richov

Since 1996, the FVEP has been an important part of MDAR’s farmland protection and agricultural economic development strategy. The program is an innovative effort that offers farmers funding for farm equipment and capital upgrades following the completion of a business planning phase and in exchange for a 5 to 10 year non-development covenant.

During FY2017, the Farm Viability Enhancement Program provided technical assistance to 6 farms with all 6 completing business plans. These 6 farms received funding and were placed under Agricultural Covenants protecting 668.5 acres. The Program impacted an additional 325 acres of leased land and protected land under participant management. Fiscal year 2017 spending was \$450,000 in direct grants to farms and about \$25,000 was spent on technical assistance costs to consultants and business plan writers. Since the Farm Viability Program was initiated in 1996, 491 farms have been selected to participate in the program. A total of 423 farms have now received grant awards protecting over 41,500 acres with term covenants. The fall of 2017 saw 11 farms nominated into the Program and beginning the TA and planning process.

**MASSACHUSETTS EMERGENCY FOOD ASSISTANCE PROGRAM (MEFAP)**

Craig Richov

<b>FOOD BANK</b>	<b>FY 2017</b>
Greater Boston Food Bank	68.68%
Food Bank of Western Massachusetts	13.21%
Worcester County Food Bank	11.95%
Merrimack Valley Food Bank	6.16%

MEFAP enables the four regional food banks in Massachusetts (The Greater Boston Food Bank, The Food Bank of Western Massachusetts, the Worcester County Food Bank, and the Merrimack Valley Food Bank) collectively known as the Food Bank Coalition of Massachusetts, to purchase food from manufacturers, distributors and farmers. All food is then distributed to a network of 966 food pantries, soup kitchens, and shelters. Approximately 11.1% of the State’s population received emergency food assistance. Through the program, a consistent supply of quality, nutrient-dense food and locally grown fresh produce has been provided to citizens in need in the Commonwealth. The Greater Boston Food Bank administers the program for all four food banks. Funding is provided by MDAR through a line item in the annual operating budget.

The State Legislature established MEFAP in 1994 due to a reduction of federal funding. Initial funding in 1995 was just under one million dollars for food purchases. Support has steadily increased with \$17 million in FY2017. Separate service contracts with each of the four major food banks enables MDAR to distribute \$1 million in operating funds each fiscal year. MDAR oversees the purchase of food, and in fitting with our mission to encourage spending on local foods like farm fresh produce, MEFAP purchases locally produced and processed foods. The “Massachusetts Grown” Initiative earmarks a portion of the budget each year for the purchase of products from Massachusetts farmers, giving our local growers and producers another market and helping our hungry neighbors by providing nutritious, fresh produce. For 2017, \$1,222,048 worth of fruit, vegetables, eggs and dairy products were purchased from Massachusetts

farmers and distributed through MEFAP. Among the most popular of these fresh high quality items were squash, apples, sweet corn, onions, peppers, and collard greens.

Service area population and poverty statistics developed by the U.S. Census Bureau were used to determine the allocation of MEFAP funds to the four food banks. The 2017 distributions are detailed in the figure (percentages based on America’s Second Harvest statistics).

**MASSACHUSETTS FOOD VENTURE PROGRAM**

Rose Arruda

The Massachusetts Food Ventures Program (MFVP) is designed to advance the objectives of the Massachusetts Local Food Action Plan by providing funding through grants to support food ventures, primarily in communities of low or moderate income, including Gateway Cities and rural communities. Participants who are selected to participate in the program will be reimbursed up to \$500,000, and the minimum award is \$75,000.

MFVP investments will include: food processing infrastructure to meet the needs of the growing local food system; improved distribution systems to support opportunities for equitable access to fresh local food; and innovative retail outlet strategies that enhance access to healthy food.

MDAR received 14 proposals in fiscal year 2017; a total of eight grants were awarded for proposals totaling \$1,000,000. Projects include new construction that will create temporary and full time employment, as well as create facilities that will foster job creation and expansion of food access and distribution in low to moderate income areas.

**URBAN AGRICULTURE PROGRAM**

Rose Arruda

Urban Agriculture is an important component to the growing local food movement, nationally and across the Commonwealth.

MDAR recognizes that urban food production is playing an important role in addressing health, social, economic and environmental issues and is working with organizations and sister agencies to support initiatives for sustainable, urban food production.

With the official launch in February, 2014, grants from the Urban Agriculture Program were awarded to several urban farming pilot projects. The program addresses challenges facing urban farmers and supports municipalities with technical assistance to help with the development of zoning ordinances, public education and land assessments. The program is designed to build community partnerships, increase access to fresh, nutritious food for urban residents and to promote viable farming methods and support local initiatives that organizations and cities can replicate and benefit from.

**URBAN AGRICULTURAL GRANT AWARDS**

Rose Arruda

Municipalities, non-profit organizations and other governmental entities are eligible to apply for grants in the range of \$5,000 to \$75,000 with preference for projects that attract multiple partners and funding sources.

The Urban Agricultural Grant Awards helps more enterprises in cities across the Commonwealth to grow their own food. The funds help to address some of the challenges facing urban farmers, such as suitable land, nutrient-poor soils, high start-up costs, restrictive zoning rules and lack of farming and business training.

In FY17, 19 projects received a total of \$500,000. Projects ranged from soil regeneration, commercial greenhouses, mobile market vehicles, and infrastructure improvements.

# DIVISION OF ANIMAL HEALTH

**Division Director**  
Michael Cahill

The Division of Animal Health’s focus is preventing the introduction or spread of infectious and contagious diseases of domestic animals. This is accomplished through the imposition of health certification, testing and vaccination requirements for animals being imported, transferred within, or simply residing in Massachusetts. Since the level of care an animal receives from its owner can have a direct effect on its immune system and the animal’s susceptibility to illness, animal welfare is an integral component of disease prevention. By partnering with federal, state and municipal agencies, the Division of Animal Health works to promote and safeguard animal health and welfare in the Commonwealth. Regulating certain animal-related agricultural activities, which may include the inspection, examination, and licensing of both food-producing and companion animals, provides additional oversight where there may be increased risk to animal or human health. The Division licenses, inspects, or registers dairy farms (both raw and pasteurized producers), commercial cattle, poultry, and swine operations, as well as race horses and equine riding stables, pet shops, and animal rescue shelters. Additionally, the Division prepares emergency response plans for disease outbreaks in Livestock or poultry, and emergency sheltering plans for companion animals affected by natural disasters or other emergencies. Further, the Division is also responsible for providing training to municipal animal control officers, on these and other related matters

The Division is comprised of 18 full time employees, including a veterinarian, program managers, inspectors, and administrative support staff. Division personnel work within several programs with funding provided by the United States Department of Agriculture through cooperative agreements (see table below). This financial support allows the Division to continue important disease surveillance and response efforts by maintaining or even increasing staff levels even when the Commonwealth’s budgetary constraints threaten to hinder these necessary activities.

Cooperative Agreement	2017 FUNDING
<i>Foreign Animal Disease Prevention</i>	<i>\$1,091.57</i>
<i>Active and Passive Surveillance for the avian program (formerly Notifiable Avian Influenza)</i>	<i>\$96,492.73</i>
<i>Scrapie</i>	<i>\$11,281.23</i>
<i>Swine Garbage Feeding Surveillance</i>	<i>\$18,957.53</i>
<i>Animal Disease Traceability</i>	<i>\$56,462.00</i>

For 2017:

## PROGRAM LISTING

- Animal Disease Traceability Program
- Animal Imports and Livestock Markets
- Animal Shelter and Rescue Program
- Dairy Program
- Equine Program
- Homeless Animal Prevention and Care Fund Program (Mass Animal Fund)
- Municipal Animal Inspection Program
- Pet Shop Licensing and Inspection Program
- Poultry Program
- Rabies Control Program
- Reportable Disease Program
- Swine Program

# ANIMAL IMPORTS AND LIVESTOCK MARKETS

Esther Wegman

All livestock, horses, poultry, waterfowl, and other animals, including cats, dogs and other pets entering Massachusetts from other states must comply with Commonwealth regulations that require an official Certificate of Veterinary Inspection stating the animal is healthy prior to travel. Additionally, some species may require certain testing to ensure negative status for diseases of concern depending on their state of origin. These measures significantly reduce the possibility of introducing contagious disease to the Commonwealth’s domestic animal population. To further enhance these efforts, livestock and poultry dealers and transporters are licensed and their equipment and facilities are inspected. There were 29 licensed livestock dealers, 12 licensed equine dealers, and 56 licensed poultry dealers in Massachusetts in 2017.

## DAIRY PROGRAM

John Nunes

The Dairy Program ensures a healthy environment for livestock and a safe, high quality supply of milk at fair prices for consumers, processors, and dairy farmers. This requires careful inspection and monitoring to enforce the relevant laws and regulations. The Program monitors milk production, hauling, distribution, pricing, marketing, and inspection of dairy farms to assure a safe and healthy supply of milk to processors, and ultimately consumers. Many factors influence the quality and quantity of milk produced by a dairy farm. Bacteriological counts measured through testing of milk samples helps determine the quality of milk. When the counts exceed regulatory standards, a dairy farmer is required to return to compliance within a timely fashion. At the end of 2017 there were 132 bovine farms and 12 caprine farms certified as dairies.

### Enforcement Actions

The Division utilizes a progressive enforcement protocol consisting of a Letter of Warning for violations required to be corrected within the following 10 days; a Letter of Warning for test results indicating 2 of the last 4 samples were out of compliance with standards; a Shut-Off Order for test results indicating 3 of the last 5 samples were out of compliance with the standards; and an immediate Cease and Desist order for any test results that were excessively beyond the range of accepted standards.

In 2017 the Division issued:

ENFORCEMENT ACTIONS	2017
10-day Letter of Warning	4
2 out of 4 Letters of Warning	31
3 out of 5 Shut-Off Orders	7
Cease and Desist	21
Antibiotic Residue Shut-Offs	1

## EQUINE PROGRAM

Michael Gold

The Division of Animal Health administers a number of programs involving horses and other equine species. Licenses are issued to horseback riding instructors and the riding schools/stables where they operate. Riding stable licenses are also issued to any business where horse-drawn hay rides, horse-drawn sleigh rides, carriage rides, pony rides, and trail rides are offered to the public for a fee. As noted above, the Division also requires a license for anyone engaged in the business of dealing, auctioning, or transporting equine animals. This licensing includes record keeping requirements that seek to bolster other programmatic disease control efforts. Additionally, the Division organizes the registration program for the Massachusetts Gaming Commission which promotes the breeding and racing of thoroughbred and standardbred horses in the Commonwealth. In 2017 MDAR issued 2,312 licenses for horseback riding instructors and licensed 482 riding school/stables.

**Enforcement Actions**

In 2017, 7 riding school/stables were found operating without licenses and 3 riding instructors were found operating without licenses. All seven were issued Warning Notices, 5 ceased their operations and 2 successfully completed the process to become licensed. The 3 unlicensed riding instructors were also issued Warning Notices. Two completed the licensing program, and became licensed. The third had stopped teaching prior to receiving the notice and will continue to be monitored to ensure compliance. One riding instructor had their license revoked for violating regulations. There were 5 stables cited for regulatory violations, 2 have fully complied, 1 complied but has new issues that were still pending on December 31, 1 has shown improvement and we are working with them to ensure full compliance in a timely manner, and 1 has temporally ceased all operations with the plan to fully comply before restarting. Any stables with outstanding issues will not be renewed until compliance with all regulations has been documented.

**HOMELESS ANIMAL PREVENTION AND CARE FUND PROGRAM**

Lauren Burbridge

The Homeless Animal Prevention and Care Fund (Mass Animal Fund), administered by the Division of Animal Health, seeks to respond to the Commonwealth’s ongoing problem of animal homelessness by providing no-cost spay/neuter/vaccination resources for homeless dogs and cats in municipal animal control facilities, for dogs and cats owned by low-income Massachusetts residents, and for feral cats. The Fund also provides free training opportunities and support to Massachusetts Animal Control Officers (ACO) so they can better serve their communities and provide uniform enforcement of animal control laws.

Since inception, the Fund has acquired \$1,543,316 to help address the needs of cats and dogs in the Commonwealth. The Massachusetts Animal Fund relies on donations from Massachusetts taxpayers, who have contributed 88% of this revenue through voluntary donations on Line 33f of the Massachusetts Income Tax Return. Additional funding has been provided through online donations, grants and a 2017 Commonwealth of Massachusetts Budget Line Item of \$100,000. The Mass Animal Fund Spay/Neuter/Vaccination Voucher Program sent its first voucher in in July 2014; since then, the program has disseminated 11,306 vouchers and has provided no–cost assistance to 8,012 animals at one of 35 participating veterinary providers across the state. Of the voucher surgeries completed, 1,137 were completed in 2017. The largest population served was dogs and cats from low-income households (67%), followed by animals in municipal care (27%) and feral cats (6%). The most surgeries completed were on female cats (30%), followed by male cats (24%), male dogs (24%) and female dogs (22%). Reimbursement rates for surgeries were raised in November 2016, and the average cost of surgery is now \$141. In 2017, a total of \$160,868 was distributed by the Spay/Neuter Voucher Program, and an additional \$11,515 was spent in to assist 196 dogs and cats through the Fund’s dedicated emergency fund to address three animal hoarding cases and two cases of disease outbreak.

The Fund rolled out the Animal Control Officer Core Competencies Training Program in the March of 2016 and in the first two years of the program over 392 commonwealth ACOs have been trained in the areas of animal laws in Massachusetts, emergency preparedness, animal behavior/safe handling, communication/ officer safety, and report writing /record keeping. Continuing education course options were rolled out beginning in August 2016 and since the Fund has approved 76 courses for continuing education credit. In 2017, ACOs in Massachusetts completed 3,524 hours of continuing education.

**MUNICIPAL ANIMAL INSPECTOR PROGRAM**

Michael Cahill

The Division of Animal Health is responsible for appointing municipal animal inspectors for each and every city and town in the Commonwealth. These inspectors act as agents of the Division of Animal Health in the communities they serve. The primary duty of the municipal inspector involves issuing quarantines to owners of animals that have been exposed to or are potentially spreading the rabies virus. The other major role the inspectors fulfill for the Division is conducting the annual inspections of all domestic livestock and poultry housed on properties in their respective towns. These inspections are a part of MDAR’s disease surveillance system and assist in ensuring animal owners provide basic necessities for the animals in their care. Additionally, the information the Division

receives through these inspections assists in the development of emergency response plans for disease outbreaks or other disaster situations. Municipal Animal Inspectors may be called upon to serve as first responders in implementing these plans at the local level. During 2017 there were 542 municipal animal inspectors appointed to fulfill the above duties for cities and towns across the Commonwealth.

**PET SHOP PROGRAM**

Esther Wegman

The Division of Animal Health has the statutory responsibility to license all pet shops. In 2017 there were 154 duly licensed pet shops, and in 2016 that number decreased slightly to 148. Inspections are required for licensure and for subsequent annual license renewals of all Massachusetts pet shops. Each establishment must meet strict facilities requirements designed to maximize sanitary conditions that promote animal health. These requirements are in place to protect the health of the animals, as well as that of the visiting public and the employees who work in these shops. In 2017, there were 11 pet shops found to be operating without the required license. All were issued an Order to Cease and Desist and were required to come into compliance before continuing activities. Fines were issued on 30 different occasions based on violations of the regulations. One store was fined twice for operating without a license, having violated an Order to Cease and Desist. In addition, 2 stores were denied licenses. One of the stores eventually came into compliance and was issued a license.

**POULTRY PROGRAM**

Megan Megrath

The Poultry Program works with producers and consumers promoting local poultry and poultry products. Massachusetts law requires live poultry and hatching eggs moving within the Commonwealth to originate from flocks tested for and confirmed free of Salmonella pullorum bacteria. This annual testing is performed by the Division of Animal Health. Other testing available to Massachusetts poultry producers include Avian influenza, Mycoplasma gallisepticum, M. synoviae, M. meleagridis and Salmonella enteritidis.

In 2017, 10,079 birds were tested for salmonella pullorum; this is a slight increase from 2016. However, the number of flocks tested decreased from 341 to 312 in 2017. As is always done through our cooperative agreements with the United States Department of Agriculture (USDA), 10% of the samples drawn from each premises were also screened for Avian Influenza. In 2017, there was a decrease of 558 birds from exhibition and commercial turkey flocks tested for AI, for a total of 3037.

During 2017, two commercial turkey farms and one exhibition poultry producer requested enhanced testing which resulted in 687 samples for Mycoplasma gallisepticum, 287 samples for M. synoviae and another 200 samples for M. meleagridis.

Screening tests for salmonella pullorum identified 17 flocks with a total of 25 suspect or positive birds in 2017. Eleven of the birds were test negative after 21-30 days. Further testing on 5 birds and necropsies done on seven of the remaining birds were all negative for salmonella pullorum. Two birds from one positive flock disappeared before the flock was retested, resulting in the entire flock being retested and at that time all birds were negative.

Office staff received 27 calls from flock owners reporting sick poultry in their flocks during 2017. These calls are screened using an intake form developed by the poultry staff. The questions on the intake form are designed to gauge the severity of the illness in the poultry flock and evaluate the possibility of a flock infected with Avian Influenza. Once the intake form is sent to the poultry inspector, the inspector speaks with the flock owners. The majority of the calls received involved flocks most likely infected with Mycoplasma Gallisepticum, a respiratory disease, the virus Mareks disease, or Coccidiosis a protozoal gastrointestinal parasite. Two of our smaller turkey producers reported illness's in their flocks. Birds were sent for necropsies; one flock had a diagnoses of Fowl Cholera and the other with pneumonia. The flock owners worked with their veterinarians to resolve the illnesses. Several other calls revealed issues with flock management and poultry program staff were able to help the owners correct these by educating owners about appropriate animal care.

In 2017, Massachusetts added four new participants to the National Poultry Improvement Plan (NPIP) for a total of 46 flocks. Under NPIP Avian Influenza screening is required at different intervals for different flock types. Massachusetts has one game bird flock

(pheasants) participating under NPIP. The breeding portion of the flock are required to be tested every six months, while the birds raised for release must be tested quarterly, resulting in 180 samples in 2017. The program also enrolled two exhibition poultry producers that each sell over 1000 hatching eggs or live birds per year. Their testing regimen allowed them to expand their customer base by satisfying the import requirements for Avian Influenza testing across the country. This resulted in an additional 120 AI samples per year submitted by the Department. Massachusetts largest commercial egg producer is participating in NPIP in order to exporting shell egg product. Participation in this program classification generated 240 samples for AI and also meets the requirements for shipping spent hens to market.

There is a tremendous amount of paperwork and reporting that is required of the NPIP program. Fourteen of the Massachusetts participants are now taking advantage of the electronic import/export certificates. This feature has benefited the program by reducing the amount of work required to file the hard copy forms. The electronic forms have also facilitated tracking import/export of poultry in Massachusetts for program participants. The database is easily searchable and capable of generating reports of various types. For instance, there were 111,607 total eggs/poultry imported into MA in 2017, this number does not include poultry that was imported on paper forms too numerous to count. Massachusetts producer's using the electronic forms produced 68,310 hatching eggs or birds for sale within the commonwealth.

The NPIP program continues to expand and has increased the demand on poultry staff at the Department. In 2017, NPIP implemented Biosecurity Principles which are prerequisites for any producer seeking indemnification following an outbreak of Highly Pathogenic Avian Influenza. In order to remain an NPIP participant, flock owners must submit a written biosecurity plan in order to be eligible for indemnity. Exemptions to the rule are Commercial layer farms with fewer than 75,000 birds, premises with fewer than 100,000 chickens or 30,000 turkeys raised for meat, and game bird premises that raise fewer than 25,000 birds annually. Audits of the biosecurity plan must be done once every 2 years. The Department serves as the "Official State Agency" (OSA) responsible for doing the audits. This requirement became effective on July 1, 2017. Massachusetts has two compliant flocks. At the present time the program appears to focus on commercial producers, and has not yet been expanded to include exhibition flocks.

The Poultry Program provides producers, consumers and municipal and state officials with educational materials, information on safe egg handling, best management practices, production/grading support and flock inspections. The local food movement and growth in consumer awareness of how food is produced have contributed to an expansion of backyard and commercial poultry production here in Massachusetts. The efforts of the Division of Animal Health strive to educate our residents. It is our hope that, through education, we can reduce the potential for conflicts with abutting neighbors, government officials and poultry enthusiasts. The Division of Animal Health supports the keeping of poultry when it is done responsibly; benefiting the birds, the owners and the communities in which they are located.

**RABIES PROGRAM**

Elsie Colon

Rabies is a viral disease that can affect all mammals, including humans. The virus attacks the central nervous system and can be secreted in saliva. Because rabies affects people as well as animals, control of this disease has become a top priority for the Division of Animal Health. With the cooperation of the Department of Public Health, the Division of Fisheries and Wildlife, and Municipal Animal Inspectors, every aspect of potential rabies exposure is addressed in order to prevent further spread of the virus.

In 2017, there were 4,700 reported incidents involving a domestic animal biting or scratching a human or another domestic animal. There were also 2,230 domestic animals that had possible exposures to rabies through contact with wildlife or were found to have received wounds from an unknown source that appeared to be from a fight with another animal. 132 of those incidents involved an animal that was submitted for rabies testing at the Massachusetts Department of Public Health's lab and were confirmed positive for the disease.

To enhance the numbers of vaccinated domestic animals in Massachusetts, the Rabies Program has implemented a user friendly registration system for municipalities and entities holding rabies vaccination clinics. Registered clinics are posted on the MDAR website at <http://www.mass.gov/eea/agencies/agr/animal-health/rabies-control-program/>. In 2017, there were 92 rabies vaccination clinics promoted through this service. As part of the 16th annual outreach effort by the Division to increase awareness about rabies,

laws requiring vaccinations for cats and dogs, and the benefits of vaccinating domestic animals, the Rabies Program distributed literature throughout Massachusetts. Staff also attended various MDAR and stakeholder events to distribute information and give presentations.

### REPORTABLE DISEASE PROGRAM

Esther Wegman

Reportable diseases include foreign animal diseases that are not currently affecting the state, diseases that have serious consequences to public or animal health, and diseases that MDAR has either previously eradicated from Massachusetts or is very close to eradicating. Veterinary practitioners are required to report suspected or positive cases of these diseases promptly to the Division of Animal Health. The Division seeks early detection in order to mount a rapid response in an effort to reduce the number of animals and animal owners affected by a disease outbreak.

In addition to the rabies cases mentioned previously, there were 188 suspected cases of reportable diseases in 2017, including the following:

2017 CASES	DISEASE	ANIMAL(S) IMPACTED
99	Parvovirus	dog
13	Leptospirosis	cattle, dog
1	Canine Influenza	dog
13	Panleukopenia	cat
12	Canine Distemper	dog
18	Strep equi (Strangles)	horse
13	Feline Calicivirus	cat
1	Eastern Herpes Virus-1	horse
3	Brucellosis	dog
1	Erysipelas	swine
1	Bovine Viral Diarrhea	cattle
1	Potomac Fever	horse
1	Mycoplasma gallisepticum	turkey
1	Listeria	goat
1	Salmonella pullorum	turkey

### SHELTER AND RESCUE PROGRAM

Patricia Cabral

The Division of Animal Health’s Shelter and Rescue Program ensures the health and safety of companion animals being offered to the public for adoption, through the registration of individual shelters and rescue groups who operate adoption programs within Massachusetts and those that adopt animals into Massachusetts from other states. Since many shelter and rescue animals have had little or no veterinary care, this disadvantaged portion of the domestic animal population requires greater attention. The rules that are in place serve as protection to the Commonwealth’s resident animal population, the animals being handled within the shelter and rescue community, and the individuals who seek to help them. For more information, see <http://www.mass.gov/eea/agencies/agr/animal-health/shelter-and-rescue/>

#### Enforcement Actions

In 2017, there were 400 registered shelters and rescues operating in Massachusetts. The Division issued 16 Orders to Cease and Desist in 2017, to shelters and rescues that had failed to register with the Department and operate within the prescribed rules (Order 1-AHO-05). Administrative fines were issued to 4 groups in 2017, three of the groups failed to comply with the Order to Cease and Desist, and one group was fined for significant violations of the importation requirements.



# SWINE PROGRAM

Esther Wegman

The Swine Program includes permitted garbage feeders, licensed swine dealers, as well as Classical Swine Fever, Brucellosis and Pseudorabies testing. The word “garbage” is defined as any meat waste, or meat waste combined with food waste, resulting from handling, preparation, cooking, and consumption of foods, including animal carcasses or parts thereof. Anyone feeding garbage to swine being raised to be sold for public consumption must obtain a permit from the Division of Animal Health and USDA/APHIS Veterinary Services. The issuance of this permit requires a facility inspection and garbage cooker temperature check. All garbage, regardless of previous processing, must be heated to 212 degrees Fahrenheit for a minimum of 30 minutes prior to being fed to swine. These strict regulations were implemented to mitigate the risk of disease transmission associated with feeding meat scraps to swine herds. In 2017, 19 permits to feed garbage were issued to swine operations in the Commonwealth.

# DIVISION OF CROP AND PEST SERVICES

## Division Director

Taryn LaScola

The Division of Crop and Pest Services has four programs within the Division. They are the following:

Farm Products and Plant Industries: oversees the inspection and licensing of farm products, plant industries under Chapter 128 and its' accompanying regulations

Pesticides: regulates all pesticide use within the. It also is responsible for the registration and licensing of pesticide products, commercial applicators, and certain pesticide uses.

Apiary: ensures the health of the Massachusetts Honey Bee population by inspection.

State Reclamation and Mosquito Control Board: oversees the Mosquito Control Districts (MCD) throughout the state.

## FARM PRODUCTS AND PLANT INDUSTRIES PROGRAM

The Farm Products and Plant Industries (FPPI) Program staff supports multiple programs based upon seasonal or workload needs, including nursery inspection, CAPS, and feed and fertilizer programs. In many cases, inspectional staff members provide coverage for programs outside of their primary area of responsibility, which results in more effective program administration. FPPI works cooperatively with USDA and UMASS Extension on different aspects of the program.

The FPPI Program had a challenging year, with staff fluctuations and meeting the demands of the industry. Demand for inspection of farm products, nurseries, and greenhouses remains high. These quality-control programs have proven to be extremely popular and helpful with growers, farmers, shippers, sellers, buyers and consumers as demand for high quality products continue to increase.

The FPPI Program administers a number of diversified quality-control programs for farm products and nursery stock, including Truth-in-Labeling Laws on fruit, vegetables, commercial feed, pet food, fertilizer, lime and seeds. The FPPI Program has also expanded into the certification of farms and production facilities under the USDA Good Agricultural Practices (GAP) requirements, which has the potential to become a significant new programmatic area.

## FERTILIZER PROGRAM

Howard Vinton

440 companies were issued licenses to manufacture and distribute fertilizer in Massachusetts, and over 4885 products were registered as specialty fertilizers. There were a total of 260 samples of fertilizer take from products being offered for sale in Massachusetts. They were tested for Nitrogen, Phosphorus and Potash. If any shortage of guaranteed levels were found a fine was assessed to the manufacturer.

## FEED PROGRAM

Howie Vinton

The Feed Program reviewed and registered 15,104 products while registering 508 companies. There were 260 feed products sampled for crude protein, crude fat and crude fiber under the Truth in Labeling law. A total of 185 feed products were found to not be registered. There were 30 warning letters were sent to companies for unregistered products and for label violations or unapproved ingredients.

**BRANDING LAW**

Howie Vinton

Inspections were made at hundreds of retail stores for conformance with the Branding Laws on potatoes and apples. Any misbranded products found are relabeled or removed from sale by issuing a Stop Sale Order.

**FRUIT AND VEGETABLE INSPECTION**

Howard Vinton

Demand for fruit and vegetable inspection services continues to be primarily for the export of apples, with the majority of those being shipped to the United Kingdom, Canada and El Salvador. The Export Apple Inspection Program is of importance primarily because of the demand for controlled atmosphere (CA) stored apples, including the valuable McIntosh variety. Apples for export are required to meet quality standards set forth by the US Export Apple Act and must also meet the phytosanitary requirements of the importing country. MDAR inspected 10 container loads of apples for shipment to the United Kingdom.

**NURSERY INSPECTIONS**

Howard Vinton

The Nursery Inspection Program requires the inspection and certification of nurseries and greenhouses in the state. All known growers and agents are required to be licensed and must renew annually. A grower’s certificate is required to sell, exchange, give, deliver or ship within the commonwealth any tree, shrub or plant commonly known as nursery stock. An agent’s license is issued to those who buy and sell nursery stock from certified nurseries throughout the country.

There were 3 inspectors on staff that conduct annual inspections of all certified nurseries in the Commonwealth to ensure that they are free of insects and plant diseases for half of the year. MDAR registered 168 nurseries with all inspected between June and September 2017.

The three MDAR Nursery Inspectors worked with our state CAPS coordinator and inspected 37 sites for Asian Longhorned Beetle (*Anoplophora glabripennis*), Citrus Longhorned Beetle (*Anoplophora glabripennis*), Spotted Lanternfly (*Lycorma delicatula*), Cucumber Beetle (*Diabrotica speciosa*) and Mile-a-Minute Vine (*Polygonum perfoliatum*). All sites came up negative.

The Department licensed 1,011 agents and 170 growers. The Inspectors conducted 170 nursery inspections.

**COOPERATIVE AGRICULTURAL PEST SURVEY (CAPS)**

Sarah Grubin

The Cooperative Agricultural Pest Survey (CAPS) program is a partnership between states and the United States Department of Agricultural Animal and Plant Inspection Services (USDA-APHIS) to detect and monitory for exotic insect pests and pathogens.

In 2017, the CAPS program conducted completed the following survey work:

Polyphagous Pests Survey: Traps were deployed at 30 sites (primarily nurseries, and farms with corn or agritourism) for the following pests:

Target	# Traps	# Collections	Positive	Negative
<i>Autographa gamma</i>	30	361	0	361
<i>Chrysodiexis chalcities</i>	30	300	0	300
<i>Helicoverpa armigera</i>	30	300	0	300
<i>Spodoptera littoralis</i>	30	361	0	361

Cerceris Biosurveillance: Colonies of *Cerceris fumipennis* were monitored by CAPS program staff. These ground nesting wasps hunt for beetles in the family Buprestidae which includes several exotic pests in the genus *Agrilus*, including the emerald ash borer (*Agrilus planipennis*). No exotic buprestids were found

Additionally, the Department administered two projects with funding from the Farm Bill:

Stonefruit Commodity Survey: Traps were deployed at 20 stonefruit orchard sites for the following pests:

Target	# Traps	# Collections	Positive	Negative
<i>Adoxophyes orana</i>	20	236	0	236
<i>Enarmonia formosana</i>	20	193	0	193
<i>Leucoptera malifoliella</i>	20	192	0	192
<i>Lobesia botrana</i>	20	234	0	234
<i>Rhagoletis cerasi</i>	5	40	0	40

Additionally, 15 orchards were surveyed for Plum Pox Virus. 1157 Leaf tissue samples were collected and none were positive for the virus.

## INVASIVE OUTREACH PROGRAMS

Jennifer Forman-Orth

MDAR provides educational outreach about invasive insect pests through the Forest Pest Outreach Program as well as the Asian Longhorned Beetle (ALB) Outreach Coordinator, who provides outreach through an agreement with the USDA/DCR ALB Cooperative Eradication Program.

The ALB outreach program participated in 41 tabling events and 16 presentations, the majority of which were in Worcester County. The ALB Outreach program also worked with several municipalities on the outskirts of the current ALB infestation to construct an information flier that was distributed to thousands of homeowners and businesses.

Relative to Emerald Ash Borer (EAB), the Forest Pest Outreach Coordinator (FPOC) has held meetings with various community stakeholders to discuss the scope of the program in person and how best to facilitate training. During these meetings, stakeholders were tasked with brainstorming EAB-related goals for their community, such as creating a tree management plan or setting up an in-house. Two new confirmed EAB sites were found by the FPOC, in the city of Waltham (Middlesex County) and the town of Georgetown (Essex County)

In addition, The Forest Pest Outreach Coordinator began volunteer recruitment for the Mass Wasp Watchers program in June and active outreach to various groups, including gardening clubs and youth organizations.

During the reporting period we distributed over 44,465 pieces of outreach materials.

**COUNTRY OF ORIGIN LABELLING (COOL) INSPECTIONS**

Trevor Battle

Since 2006, MDAR has been working under a Cooperative agreement with the USDA to perform audits relative to Country of Origin Labeling [COOL] requirements. Country of Origin Labeling is a labeling law that requires retailers, such as full-line grocery stores, supermarkets, and club warehouse stores, to notify their customers with information regarding the source of certain foods. Food products (covered commodities) contained in the law include muscle cut and ground meats (beef, veal, pork, lamb, goat, and chicken), wild and farm-raised fish and shellfish, fresh and frozen fruits and vegetables, peanuts, pecans, macadamia nuts, and ginseng. Currently MDAR has two staff members that work on the COOL program; there were 29 initial assigned and completed. There were 52 follow up inspections completed. The Department received \$54,400 reimbursement from the USDA for the inspections.

**GOOD AGRICULTURAL PRACTICES (GAP)**

Howard Vinton

There has been an increased focus on Good Agricultural Practices (GAP) to verify that farms are producing fruits and vegetables in the safest manner possible. Third party audits are being utilized by the retail and food service industry to verify their suppliers are in conformance to specific agricultural best practices. The USDA Agricultural Marketing Service, in partnership with MDAR, offers a voluntary audit-based program that verifies adherence to the recommendations made by the Food and Drug Administration. Currently MDAR has two staff member that conduct the GAP/GHP inspections. There were 21 companies that applied for USDA GAP/GHP and GAP Harmonized audits and completed the inspection process.

**PHYTOSANITARY INSPECTIONS**

Howard Vinton

Growers in Massachusetts who export plant material and/ or seed require inspections prior to shipping. State and Federal Phytosanitary Certificates are issued by staff for shipment of plants and plant materials to other states or countries, certifying the shipment as being free from insects and plant diseases.

In cooperation with USDA-APHIS Plant Protection and Quarantine, MDAR conducts phytosanitary inspections and issues federal and state certificates.

MDAR inspectors issued a total of 544 Federal Phytosanitary Certificates for plants, seeds and apples, with Canada, Netherlands, Hong Kong, Australia and China being the primary recipients. Inspectors issued a total of 1,005 state phytosanitary certificates for plants and seeds with California, Washington and Oregon being the primary recipients.

**APIARY PROGRAM**

Kim Skyrn

As a service to Massachusetts beekeepers, MDAR Apiary Inspectors work with beekeepers to help them maintain healthy colonies, and conduct hive inspections to check and assist with the detection of diseases and/or pests. Beekeepers are advised on how to treat any problems found. Apiary Inspectors also certify the movement of honey bee colonies throughout the state and the nation and inspect these colonies for diseases, pests and unwanted bee species.

Approximately 4-4,500 resident beekeepers maintained over 40-45,000 hives in Massachusetts. These numbers fluctuate from year to year due mainly to high winter hive mortality and the addition of hobbyist beekeepers to county apiary inspection lists. While the largest number of hives belong to commercial beekeepers, the Commonwealth is host to mainly hobbyist bee keepers. Both hobbyist bee keeper colonies and commercial honey bee colonies are systematically checked for diseases, parasites and other issues

The apiary program added a new state apiary in the northeast part of the state. This apiary compliments the original apiary located in Amherst on the UMASS campus.

The apiary program also launched a Varroa Mite Education program consisting of a newly created varroa mite management brochure and giving out 1,768 mite wash jars to beekeepers. This program was a huge success and will be carried out in 2018. The Apiary Team also delivered 56 outreach educational programs to 2,557 stakeholders across the state, including a monthly State Apiary beekeeping management program

A total of 527 inspection requests were received using a new online form and 27 using an existing paper form. A total of 96 apiaries were registered using the new online form. The team of five inspectors visited 636 beekeepers (4,059 colonies) looking for pests, parasites and pathogens. Findings are as follows:

<u>Common Name</u>	<u>Total Colonies Detected with Issues</u>
American Foulbrood	3
European Foulbrood	137
Chalkbrood	48
Nosema	5
Parasitic Mite Syndrome/Brood Disease Syndrome	381
Sacbrood Virus	168
Deformed Wing Virus	267
Black Queen Cell Virus	21
Chronic Bee Paralysis Virus	7
Small Hive Beetle	58
<u>Total Issues</u>	<u>1,095</u>

**STATE RECLAMATION BOARD (SRB)**

Taryn LaScola

The SRB oversees mosquito control in the Commonwealth of Massachusetts including 11 regional programs. The Board also establishes administrative and technical policy, guidelines, and best management practices to insure that mosquito control programs are effective and safe.

In the Commonwealth, there are 10 regional districts/projects providing mosquito control services to municipalities.

An initiative began to develop a new district/project in the Pioneer Valley area. Through a community compact grant that the town of Deerfield received, consultants were hired to speak to towns about the importance of mosquito control and the process of joining and creating a new project.

The districts/projects collected over 430,000 mosquitoes during the surveillance season, with over 120,000 mosquitoes submitted for arbovirus testing. While levels of *Culiseta melanura*, the mosquito that drives the EEEv cycle, were up compared to 2016, it was still a quiet year for this species. This translated to another quiet year for EEEv, with only 1 EEEv-positive mosquito pool reported for the entire season, and no human or animal cases. Increased mosquito activity following several years of drought led to an uptick in WNV-positive mosquito pools, though this data was somewhat skewed by increased arbovirus testing in the Pioneer Valley. By the end of the season, 290 WNV+ mosquito pools had been found in 90 Massachusetts communities (every mainland county), and more than 40% of the state was at a MODERATE risk for WNV. There were 6 confirmed human cases of WNV.

**PESTICIDE PROGRAM**

The Massachusetts Department Agricultural Resources is the lead state agency for pesticide regulation in the Commonwealth under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA) as well as the Massachusetts Pesticide Control Act. The Pesticide Program carries out the day to day responsibilities of regulating pesticides in the Commonwealth, including the licensing of pesticide

applicators, the registration of pesticide products, and the enforcement of the statute and regulations. In addition, the Pesticide Program carries out other pesticide related activities in support of the regulatory mandate, such as education, outreach, and water monitoring. The Pesticide Program also acts as support staff for the Pesticide Board and Pesticide Board Subcommittee.

**AQUATIC VEGETATION MANAGEMENT**

Hotze Wijnja

Reviews of new active ingredients of aquatic herbicides and rights-of-way herbicides are conducted cooperatively by MDAR and MassDEP-Office of Research and Standards (ORS). During 2017, there were no reviews conducted for aquatic herbicides. Relative to the rights-of-way herbicides, the reviews of two new active ingredients indaziflam and aminocyclopyrachlor remained in progress. Upon completion of the reviews these herbicide will be added to the Sensitive Area Materials List. MDAR staff interacts with MassDEP and stakeholders related to proposed aquatic plant management projects to control of aquatic vegetation under the Wetlands Protection Act Regulations.

Related to public drinking water supply protection, MDAR staff interacts with UMass Extension staff and pesticide applicators to ensure that water resources are sufficiently protected. During 2017, there were no situations that required targeted water quality monitoring for pesticides.

**CHILDREN AND FAMILIES PROTECTION ACT (CFPA)**

Trevor Battle

The Children & Families Protection Act (CFPA), which protects children and families from harmful pesticides, was enacted in the year 2000. The Act mandates that all public/ private schools K-12, school age child care programs and daycare centers have an Integrated Pest Management (IPM) Plan, puts limitations on pesticide use inside and outside of schools, and requires notification for some pesticide applications.

The school IPM Program continues to move closer to near 100% compliance. Currently, IPM plan compliance for both schools and daycare programs stands at 98.4% and 96% respectively.

The Pesticide enforcement division conducts routine inspections with schools regarding their IPM plans. During the inspection an inspector reviews the plan, pesticide application records and provides education and outreach regarding the requirements. There were 28 inspections were conducted during the 2017 federal fiscal year.

**ENFORCEMENT**

Michael McClean

The Enforcement program is charged with enforcing the provisions of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), the Massachusetts Pesticide Control Act (MGL 132B) and the regulations promulgated thereunder. The enforcement program conducts routine inspections of pesticide users’ establishments and the producers from which they acquire the products. Enforcement also investigates complaints regarding the misuse of pesticides in addition to providing education and outreach about Department pesticide programs. There are 4 pesticide inspectors and 1 Chief inspector.

Overall, a total of 260 pesticide inspections covering a wide range of pesticide use in the Commonwealth were completed. Inspections of note include:

- 102 physical and 20 documentary samples were collected during inspections.
- 10 Producer Establishment Inspections (PEI) were conducted using federal credentials.
- 7 Restricted Use Dealer inspections were completed.
- 68 certified applicator records inspections were completed.
- 8 Agricultural For Cause (follow-up) inspections were completed
- 58 Non-Agricultural For Cause investigations were completed; Non-Agricultural For Cause inspections consisted of consumer complaints and/or licensing violation inspections due to possible misuse pursuant to Massachusetts requirements 333 CMR.
- 10 Worker Protection Standard inspections were completed.

The pesticide enforcement staffed issued the following enforcement actions:

- 21 Letters of warnings
- 3 Administrative orders
- 1 fine
- 1 case forwarded to the Environmental Protection Agency

\*\*Please note, numbers reported are for the 2017 federal fiscal year

**GROUND WATER PROGRAM**

Hotze Wijnja

Registration Review

As part of the pesticide registration process, MDAR has an on-going program to assess the potential of pesticides to impact water resources. A total of 9 new active ingredients with use patterns that may impact water resources were reviewed and registered during 2017:

New Chemicals:

- hauxifen-methylbicyclopyrone
- pinoxaden
- Pyriofenone
- Pyroxsulam
- Tioxazafen

New Biological Pesticide Active Ingredients:

- oregano oil
- Bacillus thuringiensis ssp. Kurstaki strain EVB-113-19
- Bacillus mycoides isolate J
- Isaria fumosorosea strain FE 9901

None of these new active ingredients met the criteria for the Massachusetts Groundwater Protection List.

**Enforcement**

MDAR staff continues to include the enforcement of the groundwater regulations as part of their standard inspections. These inspections ensure that pesticide users understand and comply with groundwater regulations, particularly the notification requirement for the use of ground water protection-listed (GWP) pesticides within Zone II areas. Records of these notifications are maintained such that information on these pesticide applications is available when needed.

**WORKER PROTECTION STANDARD**

Laurie Rocco

The Agricultural Worker Protection Standard (WPS) is a regulation aimed at reducing the risk of pesticide poisoning and injury among agricultural workers and pesticide handlers. The WPS offers occupational protections to agricultural workers (people involved in the production of agricultural crops) and pesticide handlers (people who mix, load, or apply crop pesticides) that work at agricultural establishments (farms, nurseries and greenhouses). It requires that owners and employers on agricultural establishments provide protections to workers and handlers from potential pesticide exposure, train them about pesticide safety, and provide mitigations in case exposures occur. Pesticide enforcement inspectors made WPS materials including record keeping manuals available when conducting compliance monitoring of farms, and “How to Comply” manuals were distributed on DVD as well as in hard copy format.



EPA updated WPS and began educating the states on the changes in 2015. 2016 was dedicated to provide education and outreach to growers on the changes as they went into effect at the beginning of 2017. This was done when the Department was asked to provide presentations to the agricultural community along with educating growers on the changes during the 2015/2016 inspections.

**PESTICIDE APPLICATOR AND LICENSING PROGRAM**

Steve Antunes-Kenyon

The Massachusetts Pesticide Control Act requires all persons who apply pesticides in public and private places used for human occupation and habitation, with the exception of residential properties with three or less dwelling units, to be in possession of a valid license or certification issued by MDAR. There are 4 types of pesticide licenses in Massachusetts: Commercial Applicator License, Commercial Certification License, Private Certification License and Dealer License. These licenses permit the legal use of pesticides including but not limited to the following: purchase, sale, application, mixing, loading, storage, disposal, and transport.

**Certification and Licensing Exams**

Pesticide examinations are offered to individuals seeking pesticide licensure throughout the year, with a minimum of one exam each month.

The Department administered 27 pesticide exams for the four licensure types. A total of 2,306 individuals registered for exams. 1,698 passed the exam. It should be noted that not all individuals that register for the exam arrive to take the exam.

**Continuing Education**

License holders must attend continuing education programs and obtain contact hours to maintain and enhance their pesticide application knowledge. Applicators who do not meet the required number of educational hours are obligated to retake the state examination to be recertified or relicensed.

There were 1,346 applicators chosen as part of a random audit to verify that they had met the required number of contact hours by the end of a three year training period. There were 1, 039 audits approved. The remaining individuals either did not return the audit paperwork or did not satisfy the educational hours required.

**PESTICIDE APPLICATOR CONTINUING EDUCATION (PACE)**

Trevor Battle

MDAR staff, UMASS Cooperative Extension, and various industry associations and companies continued to educate the pesticide-user community regarding laws and regulations through lectures and presentations.

The Department approved 585 continuing education programs to support the recertification requirements for all licensed applicators.

**PESTICIDE PRODUCT REGISTRATION**

Susie Reed/Hotze Wijnja

Any person who has obtained a pesticide product registration from the EPA must then apply for a registration with MDAR. The registrant, or an agent acting on behalf of the registrant, is required to submit an “Application for New Pesticide Registration”, a Material Safety Data Sheet (MSDS), and a product label. A fee of \$300 dollars is also required for each different EPA registration number. New products are usually registered on a monthly basis. Every product label is thoroughly reviewed for compliance with state and federal laws and then brought to the Pesticide Board Subcommittee for consideration. A registration is valid for a period beginning with the initial date of approval by the Subcommittee and ending on the next June 30th. Each registration must be renewed annually no later than July 1, at a cost of \$300 per EPA number. Registrations of products with new active ingredients are assessed a fee of \$750 each.

**State Restricted Use Pesticide Classification (SRUP)**

A Federal General Use pesticide product registered by the Commonwealth may be classified as either general use or reclassified as State Restricted Use based upon its use pattern or the potential to become a groundwater contaminant

**Special Local Needs (SLN) Registration**

When a particular agricultural problem exists that can only be mitigated through the use of a pesticide that is not federally registered for that specific purpose, a Special Local Need registration may be issued by the state under section 24c of FIFRA.

**Experimental Use Permits (EUP)**

State experimental use permits are required to control potential hazards of pesticide experimentation under outdoors, greenhouse, and domestic animal trial conditions. To obtain such a permit, a state application must be filed with the Pesticide Board Subcommittee along with a product label, a copy of the EPA EUP and a fee of \$300 dollars.

**Summary of Product Registration**

- Products renewed: 8,468
- New products: 831
- New Active ingredient: 9
- Reclassified SRUP: 30 (re-classified)
- EUP: 1 (renewal)
- SLN: 3

**RIGHTS-OF-WAY (ROW) MANAGEMENT**

Clayton Edwards

The Rights-of-Way (ROW) program enforces the provisions of 333 CMR 11.00 by regulating the use of herbicides to control vegetation on all rights-of-ways within the Commonwealth. The ROW program has substantial interaction with many state agencies and municipalities through its administration and also provides public notification and opportunity for the general public and interested parties to comment on the various ROW treatments.

**Vegetative Management Plans (VMPs)**

VMPs are an overview of an entire ROW System. They describe potential methods of herbicide control, including pesticides, mechanical and biological methods, or any Integrated Pest Management or IPM techniques. Plans must be renewed on a 5 year cycle and must be presented at public hearings in areas affected by ROW practices.

There were 5 plans reviewed, brought to public hearing, and approved by the ROW Coordinator.

**Yearly operational Plans (YOPs)**

These plans covered operational activities along ROWs within the Commonwealth. YOP’s consist of the names, rates and amounts of pesticides to be applied along specific ROWs, as well as the individual sites, and identification of “sensitive areas” where prohibitions in standard application practices are warranted. Each plan was reviewed and comments were made by the ROW Coordinator.

MDAR reviewed 39 plans.

**HAZARDOUS WASTE COLLECTION PROGRAM**

MDAR received additional funds to host a pesticide collection program. This program was a cost share program that had approximately 102 applicators disposed of 21,000 lbs of unused, unwanted, or unregistered pesticides.

**INDUSTRIAL HEMP PROGRAM**

Massachusetts voters passed a referendum allowing the adult use of recreational marijuana in the state. An Act to Ensure Safe Access to Marijuana, which updates the Commonwealth’s laws that govern the use of marijuana, created a distinction between Marijuana, Hemp, and Industrial Hemp, allowing both Hemp and Industrial Hemp to be grown commercially or as part of an Agricultural Pilot Program. In amending M.G.L. c. 128 to include Sections 116 through 123, MDAR was given the authority to oversee Industrial Hemp in MA. MDAR established a new Industrial Hemp Program in 2017 which now employs 2 staff. There is no industrial hemp being grown or processed in Massachusetts yet, but the program is working on developing policy to allow commercial growers and processors to be licensed in MA, and is establishing an Agricultural Pilot Program which allows state departments and universities to conduct research on hemp as outlined in the 2014 Farm Bill.