NEW ENGLAND
FEEDING
NEW ENGLAND

MAINE

STATE BRIEF

2023

As more frequent and intense climate change disasters imperil food supplies around the world, where our food comes from matters more than ever.

A regional approach to food system resilience is both an *investment* in our shared future and an *insurance policy* against future risks. A regional approach to food system resilience means that we work collectively to adapt, expand, and fortify New England's food production and distribution systems to ensure the availability of adequate, affordable, and culturally appropriate food for all who call New England home.

Can the six New England states provide 30% of their food from regional farms and fisheries by 2030?

New England Feeding New England explores this question and what it will really take to grow, raise, produce, harvest, and catch more regional food and move it through a complex supply chain to our homes and other places where we eat. Our research presents an opportunity for the region: significant changes in diet (e.g., dramatically reducing consumption of ultra-processed foods and increasing fruit and vegetable consumption), a significant increase in land in agriculture, stopping the decrease in farmers and fishermen, and finding a way to actually get local/regional food in the places people shop are daunting challenges, but addressing them will leave our food system stronger and more resilient.

Through 7 research Volumes, New England Feeding New England lays out the case for a regional approach to food system resilience.

» https://nefoodsystemplanners.org/

2

How self-reliant is our region?

New England Feeding New England Volume 2 estimates regional food self-reliance (RSR)—how much food we produce compared to how much food we consume—for the five major food groups. RSR percentages varied widely from food product to food product, showing a rather lopsided capacity for self-reliance. A small number of foods were produced in large quantities relative to consumption and had self-reliance ratios near or exceeding 100% (e.g., dairy, maple syrup, potatoes, lobster, clams). Most foods, however, had self-reliance ratios of less than 10% (e.g., beef, lettuce, wheat).

⟫ New England Regional Self-Reliance for Major Food Groups

	GRAINS	VEGETABLES	FRUITS	DAIRY	PROTEINS
Servings	1.6%	28.3%	8.7%	50.0%	3.2%
Calories	1.7%	41.0%	6.9%	47.4%	2.6%

Source: Volume 2: Estimating Production for 30% Regional Self-Reliance. Note: vegetables consists of a significant amount of calorie-dense potatoes grown in Maine; dairy includes a significant amount of production in Vermont.

What can each New England state do to increase food security and access while building resilience for the whole region?

What strengths does Maine's food system possess and what opportunities can be pursued? What weaknesses persist and what threats loom?

This State Brief contextualizes important characteristics of Maine's food system for consideration.

For example, Maine generates the *highest* total agriculture and seafood sales—over $1.3 billion—and has the most agricultural land—1.3 million acres —of any New England state. It has the third largest food system economy by sales—$15.3 billion in 2017—after Massachusetts and Connecticut. Maine also has the highest rate of food insecurity in New England, and the second highest per capita food expenditures of any state in the country.

Maine has the largest amount of acreage devoted to vegetables and berries, and the second most for fruit. Along with Vermont it may have the most capacity to boost vegetable, berry, fruit, and grain production in the region. Maine has already made significant investments in long-term food production, increasing the viability of local farms and food businesses, and protecting and preserving agricultural land.

Dollar stores are by far the most common type of major grocery chain in Maine, but the state also has a significant number of independent grocery stores, like Mainely Provisions, 8 food co-ops, and many country/general stores. These smaller stores may also facilitate access to regional food.

The Maine Food Strategy

The Maine Food Strategy, published in 2016, provides a framework for connecting people and resources that can achieve measurable advances in Maine's food system. Key goals include:

» Increasing the market share of foods farmed, fished, foraged and/or processed in Maine;

» Improving food system business viability;

» Improving incomes and access to benefits for food system workers;

» Developing public policies that support food system activities;

» Reducing food insecurity in Maine.

The 2016 Maine Food Network Gathering featured remarks by U.S. Sen. Angus King and Commissioners from Maine's Departments of Agriculture, Conservation and Forestry and Marine Resources.

In conjunction with the Maine Food Strategy, the Maine Food Convergence Project hosts statewide food system networking events.

State Snapshot

Top Agricultural Products by Sales, 2017

Vegetables, mostly potatoes, made up a significant amount ($248 million out of $672 million) of agricultural sales in Maine.

VEGETABLES
36.9%

MILK FROM COWS
16.0%

GREENHOUSE/ NURSERY
10.1%

Top Manufactured Products by Sales, 2017

NONALCOHOLIC BEVERAGES
29.3%

FRUIT/VEGETABLE PRESERVING
18.6%

OTHER PRODUCTS
14.8%
(EXAMPLES: SOUP MIXES, POWDERED DRINK MIXES)

Top Seafood Products by Sales, 2022

*In 2022, American lobster accounted for **67.7%** ($389,593,287) of the value of seafood sales and **59.3%** (98,053,905) of live pounds landed. The next nearest catch by sales value, American eel, accounted for 3.5% of sales.*

AMERICAN LOBSTER
67.7%

Top Retail Food Sales by Market Channel, 2017
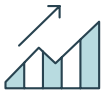
GROCERY STORES
54.7%

RESTAURANTS/ FAST FOOD
36.0%

CONVENIENCE STORES
2.9%

DIRECT SALES
0.6%

Food System Economy

How big is Maine's food system? What sectors are growing? What sectors are contracting?

Maine's food system employs about **110,000** people and generates over **$15.3 billion** in sales. Agricultural employment increased slightly and sales decreased slightly from 2007 to 2017. Employment and sales in every other category, except grocery store sales, increased from 2007 to 2017.

⟫ Economic Impact of Maine's Food System, 2017

	2017 Employment	% of Total	Growth from 2007-2017	2017 Sales	% of Total	Growth from 2007-2017
Agriculture	28,067	25.6%	-0.5%	$702,513,100	4.6%	0.2%
Fisheries	6,838	6.2%	0.2%	$622,164,000	4.1%	0.6%
Food Manufacturing	5,112	4.7%	-1.7%	$1,713,427,700	11.2%	-2.6%
Beverage Manufacturing	1,750	1.6%	3.0%	$873,478,500	5.7%	-3.7%
Wholesaling + Distributing	4,858	4.4%	-0.5%	$4,184,488,700	27.3%	2.1%
Stores	18,269	16.7%	0.6%	$4,433,197,000	28.9%	-0.5%
Food Services + Drinking Places	44,641	40.8%	1.1%	$2,792,142,900	18.2%	1.7%
TOTAL	**109,535**	**100.0%**	**0.3%**	**$15,321,411,900**	**100.0%**	**0.1%**

Source: Volume 3: Economic Impact of New England's Food System. Note: Agriculture sales in this table includes support activities. Sales values are adjusted for inflation to 2020 dollars. Agricultural sales are adjusted using producer price indices for crops and livestock.

⟫ Food System Employment Multiplier

The employment multiplier calculated in Volume 3 shows that for each additional job created in Maine's food system, total employment in the state's economy will increase by 1.45 jobs (i.e., for every 1 additional food system job, there will be 0.45 jobs spun-off those).

Total Food System Employment Impact

Maine Food System Employment

GROWS TO

158,826

109,535

MULTIPLIER 1.45

Source: Volume 3: Economic Impact of New England's Food System
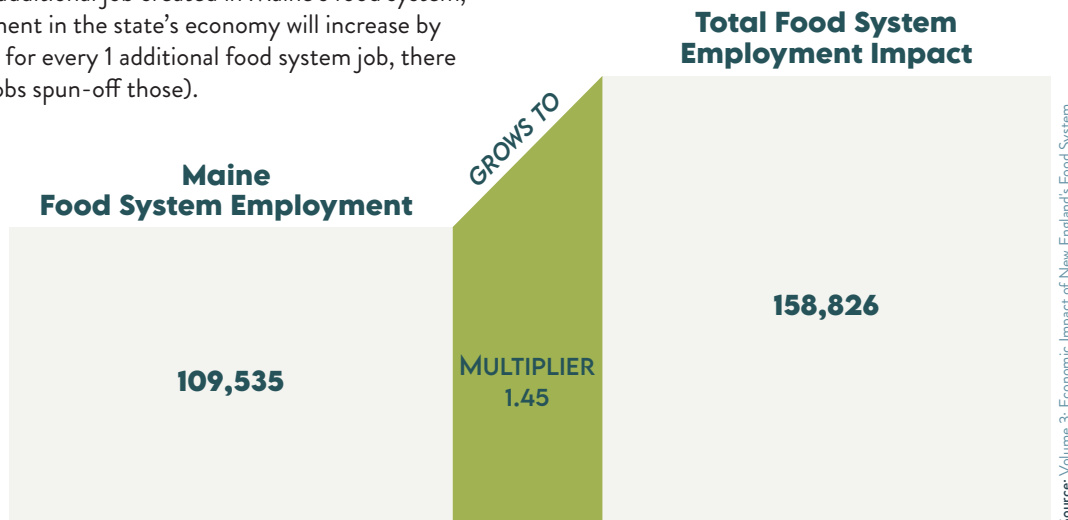
The additional 0.45 job (in aggregate) is actually a set of fractional jobs spread over the entire economy, the result of linked activity in other food system and nonfood system sectors. These include jobs in transportation, utilities, finance, trade, and government.

Food System Wages

How much do food system workers in Maine earn?

Wages/salaries are the most common source of income for the majority of Americans. Maine's food system workers, particularly food service workers, receive some of the *lowest* wages of any occupational category in the state. However, Maine has the third highest minimum wage of the New England states, and median hourly wages for many food system jobs are above the living wage level for adults with no children.

» Median Hourly Wages by Major Occupational Category, 2022

The U.S. GAO found that **restaurants** and other **eating places** employed the largest percentage of working adult Medicaid enrollees and SNAP recipients in states that provided employer data.

MINIMUM WAGE
$13.80

Values (left to right): MANAGEMENT $46.31, ARCHITECTURE/ENGINEERING $38.82, COMPUTER/MATHEMATICAL $37.50, HEALTH CARE PRACTITIONERS $36.73, LEGAL $33.73, BUSINESS/FINANCIAL OPERATIONS $33.66, LIFE/PHYSICAL/SOCIAL SCIENCES $31.53, INSTALLATION/MAINTENANCE $23.90, EDUCATION $23.61, COMMUNITY/SOCIAL SERVICES $23.58, CONSTRUCTION/EXTRACTION $23.46, ARTS/DESIGN/ENTERTAINMENT $22.36, PROTECTIVE SERVICES $21.40, PRODUCTION $20.49, OFFICE/ADMIN $19.49, FARMING/FISHING/FORESTRY $19.27, TRANSPORTATION/MATERIAL MOVING $18.18, HEALTH CARE SUPPORT $17.21, BUILDING/GROUNDS CLEANING $17.02, SALES $16.81, FOOD PREPARATION AND SERVING $16.11, PERSONAL CARE $15.78

MEDIAN HOURLY WAGES

» Median Hourly Wages by Selected Food System Occupations, 2022

LIVING WAGE
2 Adults, 2 Children: $24.58

LIVING WAGE
1 Adult: $16.53

Values (left to right): SOIL/PLANT SCIENTISTS $30.08, FOOD SERVICE MANAGERS $30.00, CHEFS/HEAD COOKS $26.75, FOOD PREP SUPERVISORS $20.43, BUTCHERS/MEAT CUTTERS $18.63, FARMWORKERS/LABORERS- CROPS 18.55, SHORT ORDER COOKS $18.00, FOOD BATCHMAKERS $17.84, RESTAURANT COOKS $17.68, WAITERS/WAITRESSES* $17.20, INSTITUTION/CAFETERIA COOKS $17.17, BAKERS $16.61, FAST FOOD COOKS $14.54

MEDIAN HOURLY WAGES

Food Access

Do Mainers have equitable access to food stores?

Maine's Indigenous, Black, Asian, Hispanic, biracial, and other non-White populations disproportionately live in low income/low access (LILA)* census tracts.

Sources: USDA Food Research Atlas, American Community Survey

Maine is also home to predominantly rural, White populations with low income and low access.

A higher percentage (i.e., a more purple census tract) means that residents are more likely to be non-White, Hispanic, and/or low income with limited access to grocery stores, particularly in cities.

EXAMPLE
Penobscot Indian Island Reservation, which spans the Penobscot River, is 72% Indigenous. More than 19% of the population lived below the poverty level.

% NON-WHITE OR HISPANIC BY LILA CENSUS TRACT

- 78-99%
- 59-78%
- 41-59%
- 21-41%
- 2-21%

* Low Income/Low Access (LILA) = Where a large proportion of the residents have low-incomes and are more than 1/2 mile from a food source for urban populations, and over 10 miles for rural populations.

Map counties: AROOSTOOK COUNTY, PISCATAQUIS COUNTY, PENOBSCOT COUNTY, SOMERSET COUNTY, FRANKLIN COUNTY, WASHINGTON COUNTY, Bangor, HANCOCK COUNTY, OXFORD COUNTY, KENNEBEC COUNTY, WALDO COUNTY, Augusta, KNOX COUNTY, ANDROSCOGGIN COUNTY, LINCOLN COUNTY, CUMBERLAND COUNTY, SAGADAHOC COUNTY, YORK COUNTY, Portland

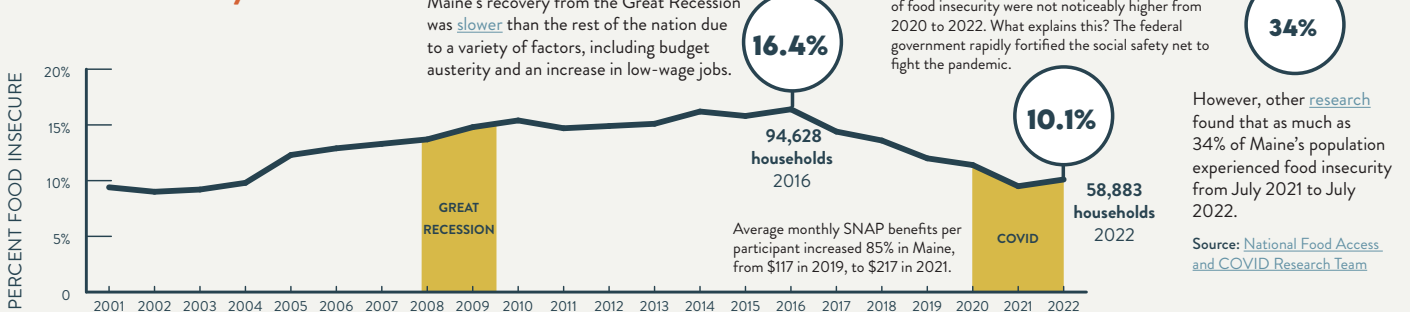|	% OF POPULATION	% LIVING IN LILA TRACTS
White	90.2% (1,228,264)	9.0% (110,741)
2 or More Races	3.9% (53,573)	8.6% (4,611)
Hispanic	2.0% (26,609)	10.5% (2,805)
Black	1.8% (25,115)	13.2% (3,303)
Asian	1.2% (16,668)	13.2% (2,208)
Indigenous	0.5% (7,293)	28.0% (2,041)
Other Race	0.3% (4,430)	5.2% (230)
Hawaiian/PI	0.03% (407)	2.9% (12)

» Food Insecurity

Maine's recovery from the Great Recession was slower than the rest of the nation due to a variety of factors, including budget austerity and an increase in low-wage jobs.

The COVID-19 pandemic also triggered economic hardship across the country, but USDA estimates of food insecurity were not noticeably higher from 2020 to 2022. What explains this? The federal government rapidly fortified the social safety net to fight the pandemic.

16.4%
94,628 households 2016

10.1%
58,883 households 2022

Average monthly SNAP benefits per participant increased 85% in Maine, from $117 in 2019, to $217 in 2021.

34%

However, other research found that as much as 34% of Maine's population experienced food insecurity from July 2021 to July 2022.

Source: National Food Access and COVID Research Team

PERCENT FOOD INSECURE — 20%, 15%, 10%, 5%, 0

GREAT RECESSION

COVID

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

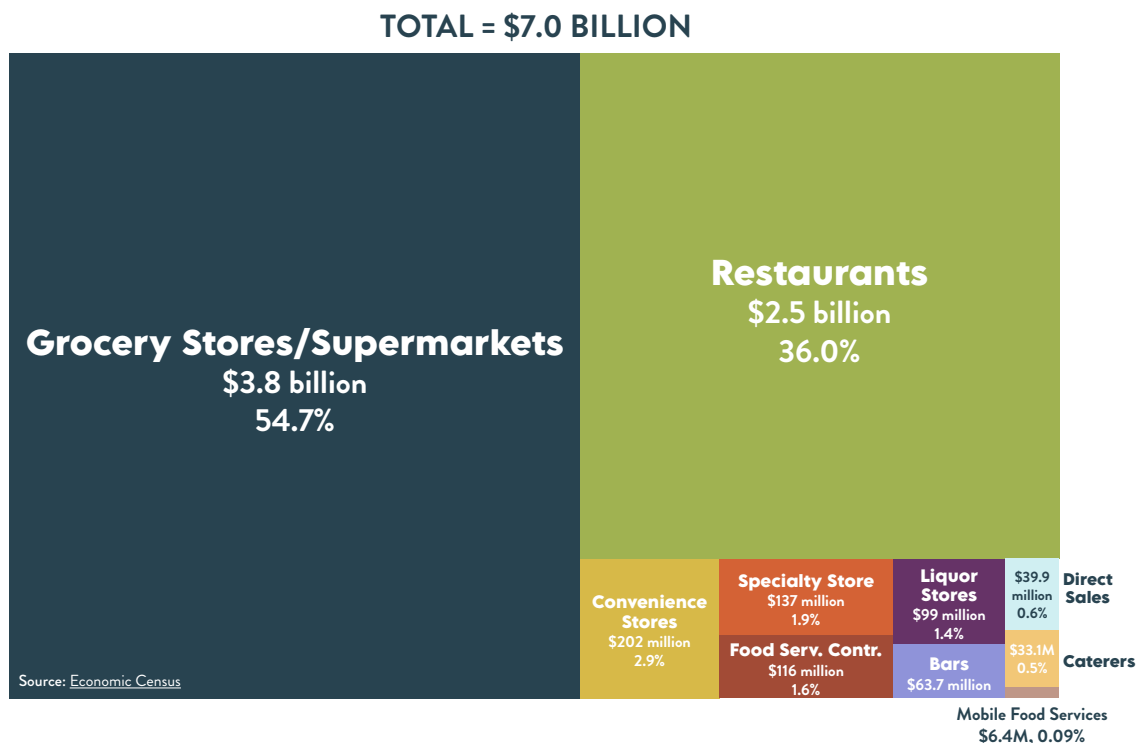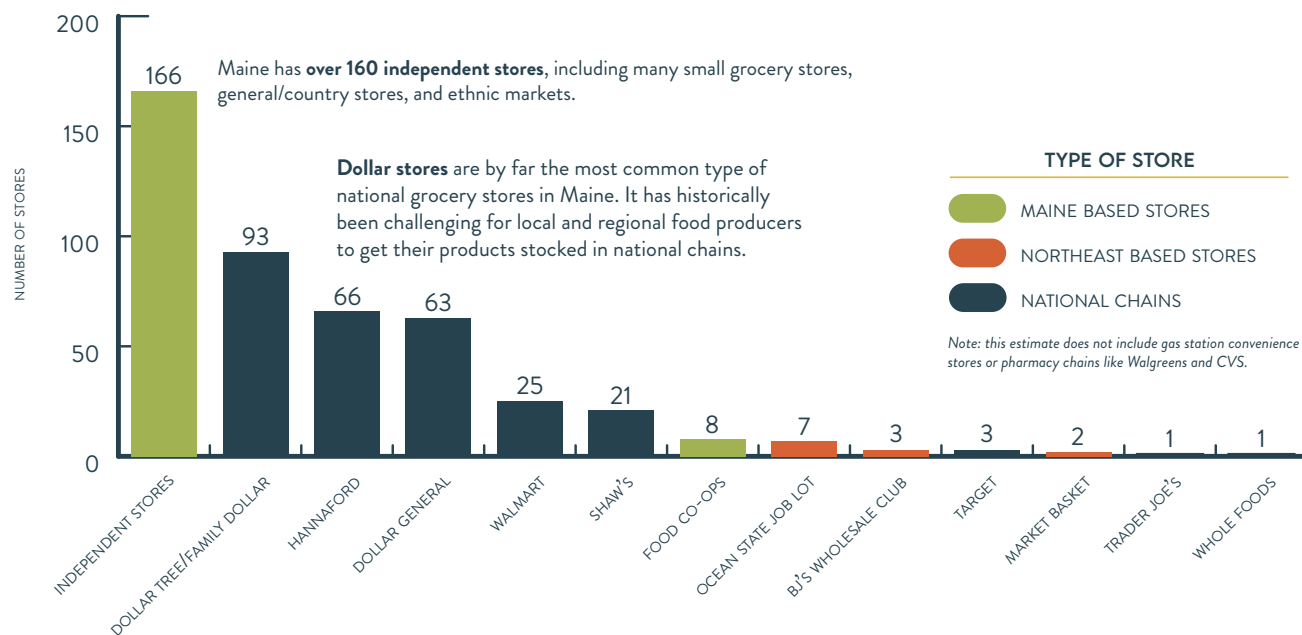**Sources:** USDA Economic Research Service, KFF (SNAP Benefits)

Food Expenditures

How much do Mainers spend on food? Where do they shop?

Mainers spent over **$7.0 billion** at stores and restaurants in 2017. Grocery stores (54.7%) and restaurants (36.0%)—which includes full-service and fast food restaurants—accounted for 90.7% of total sales. Direct sales from farmer to customer made up 0.6% of total retail sales.

» Food Stores and Services Sales, 2017

TOTAL = $7.0 BILLION

Grocery Stores/Supermarkets
$3.8 billion
54.7%

Source: Economic Census

Restaurants
$2.5 billion
36.0%

Convenience Stores
$202 million
2.9%

Specialty Store
$137 million
1.9%

Food Serv. Contr.
$116 million
1.6%

Liquor Stores
$99 million
1.4%

Bars
$63.7 million

$39.9 million
0.6%
Direct Sales

$33.1M
0.5%
Caterers

Mobile Food Services
$6.4M, 0.09%

» Count of Food Stores in Maine

Maine has **over 160 independent stores**, including many small grocery stores, general/country stores, and ethnic markets.

Dollar stores are by far the most common type of national grocery stores in Maine. It has historically been challenging for local and regional food producers to get their products stocked in national chains.

TYPE OF STORE

- MAINE BASED STORES
- NORTHEAST BASED STORES
- NATIONAL CHAINS

Note: this estimate does not include gas station convenience stores or pharmacy chains like Walgreens and CVS.

NUMBER OF STORES

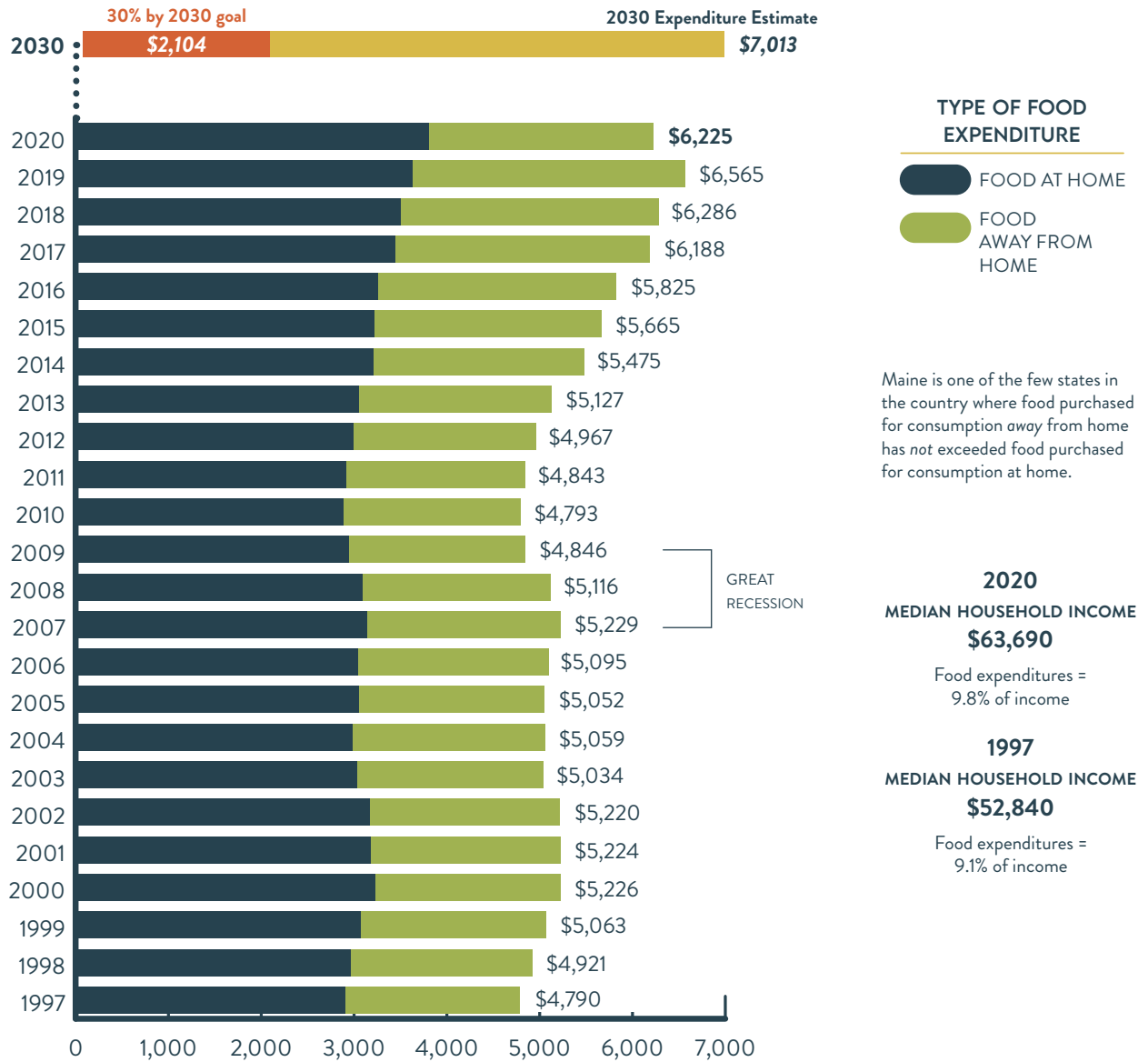| Store	Count
INDEPENDENT STORES	166
DOLLAR TREE/FAMILY DOLLAR	93
HANNAFORD	66
DOLLAR GENERAL	63
WALMART	25
SHAW'S	21
FOOD CO-OPS	8
OCEAN STATE JOB LOT	7
BJ'S WHOLESALE CLUB	3
TARGET	3
MARKET BASKET	2
TRADER JOE'S	1
WHOLE FOODS	1

Source: Google search.

What would it take to meet a 30% food expenditure goal?

#2 Maine had the second highest per capita food expenditures (**$6,225)** of any state in the country in 2020. With an average annual food expenditure growth rate of 1.5% from 1997 to 2020—and population increase to 1,411,097 by 2030—per capita food expenditures may reach **$7,013** by 2030. About **$2,104** per capita would then have to be spent on regional food to meet our 30% goal.

	30% by 2030 goal	2030 Expenditure Estimate
2030	**$2,104**	**$7,013**

Year	Expenditure
2020	**$6,225**
2019	$6,565
2018	$6,286
2017	$6,188
2016	$5,825
2015	$5,665
2014	$5,475
2013	$5,127
2012	$4,967
2011	$4,843
2010	$4,793
2009	$4,846
2008	$5,116
2007	$5,229
2006	$5,095
2005	$5,052
2004	$5,059
2003	$5,034
2002	$5,220
2001	$5,224
2000	$5,226
1999	$5,063
1998	$4,921
1997	$4,790

GREAT RECESSION [bracket spanning 2007–2009]

TYPE OF FOOD EXPENDITURE

■ FOOD AT HOME

■ FOOD AWAY FROM HOME

Maine is one of the few states in the country where food purchased for consumption *away* from home has *not* exceeded food purchased for consumption at home.

2020
MEDIAN HOUSEHOLD INCOME
$63,690
Food expenditures = 9.8% of income

1997
MEDIAN HOUSEHOLD INCOME
$52,840
Food expenditures = 9.1% of income

Source: USDA State-Level Food Expenditure Series

Northeast consumer expenditure data indicates that ultraprocessed food and beverage products make up the top 3 food expenditure categories, followed by fresh fruit.

MISCELLANEOUS FOODS
$1,147 (18.7%)
Frozen prepared meals, canned food, chips, desserts, etc.

BAKERY PRODUCTS
$585 (9.5%)
Bread, crackers, cookies, cakes, pies, doughnuts, etc.

NONALCOHOLIC BEVERAGES
$576 (9.4%)
Soda, coffee, tea, ice, sports drinks, etc.

FRESH FRUIT
$467 (7.6%)

Source: Consumer Expenditure Survey

Climate Change

## How will climate change impact Maine's food system?

Food system activities like cultivating crops, raising livestock, and land use changes, are major drivers of climate change *and* food systems are particularly vulnerable to a changing climate. July 2023 was the warmest month on record and major changes are already underway across Maine and New England:

» **Benefits to Agriculture:** longer growing periods and milder temperatures should allow farmers to experiment with new crops or practices that were previously not viable in Maine.

» **Loss of Seasonality:** at the same time, less distinct seasons, milder winters, earlier spring conditions, and more unpredictable and extreme weather are expected to impact agricultural production. For example, excessive rainfall in 2023 has created wet and muddy fields that makes harvesting challenging if not impossible.

3.2° The average temperature in Maine in 2022, 43.3°F, was 3.2°F higher than the average temperature during the previous century.

⫶ Air Temperature Anomaly
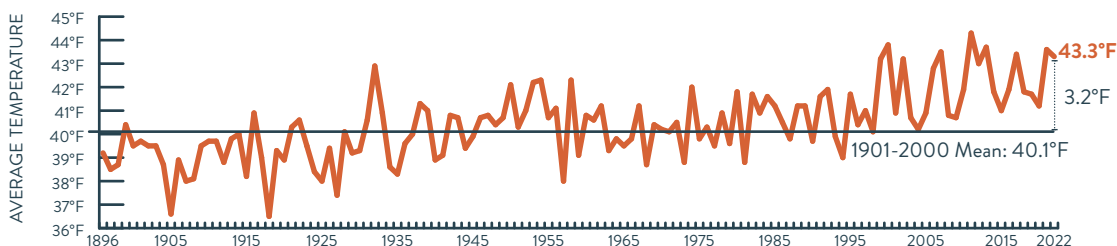
Source: NOAA National Centers for Environmental Information

⫶ Projected Climate Risks

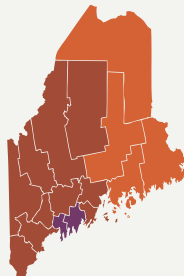VERY HIGH   HIGH   MEDIUM   LOW   NO RISK

HURRICANES

Hurricanes Gloria (1985) and Bob (1991) were billion-dollar disasters that impacted Maine.
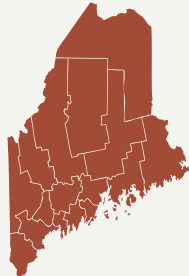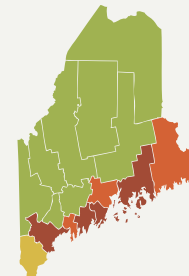
EXTREME RAIN

Annual precipitation and extreme precipitation events in Maine have been above average in recent years.

SEA LEVEL RISE

The sea level around Bar Harbor has increased by 8 inches since 1950. Sea level is expected to rise by 2 feet by 2050.

Source: Stuart A. Thompson and Yaryna Serkez, September 18, 2020, "Every Place Has Its Own Climate Risk. What Is It Where You Live?," *The New York Times*. Based on data from Four Twenty Seven.
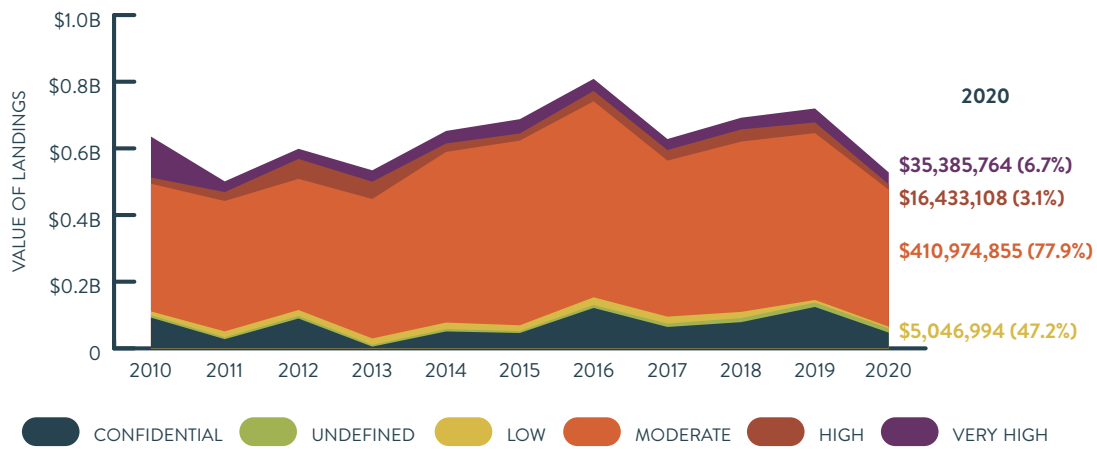
» **Ocean Under Threat:** the Atlantic Ocean supports tourism, recreation, and economic activities, including fisheries. Warmer ocean temperatures—the Northeast Continental Shelf (i.e., Gulf of Maine) is warming much faster than the global average—sea level rise, acidification, and increased storm frequency and intensity all threaten marine ecosystems and the communities that depend on them. As a result, for example, some lobstermen are diversifying their incomes by seeding and harvesting seaweed in the offseason.

9.8% About 10% of Maine's seafood catch in 2020 was classified as having very high or high vulnerability to changes in abundance or distribution due to climate change.

» Climate Vulnerability of Maine Catch

2020

$35,385,764 (6.7%)
$16,433,108 (3.1%)
$410,974,855 (77.9%)
$5,046,994 (47.2%)

CONFIDENTIAL UNDEFINED LOW MODERATE HIGH VERY HIGH

Source: NOAA Fisheries, Northeast Vulnerability Assessment

» **Risks to Cities:** the Northeastern U.S. is home to densely populated cities, including Portland, rural communities, critical transportation corridors and infrastructure, and culturally and historically significant sites. Climate change impacts, including from flooding, hurricanes, and sea level rise can damage infrastructure, displace populations, strain our emergency response system, and unevenly affect historically marginalized and low-income communities. Source: Fourth National Climate Assessment, Chapter 18: Northeast
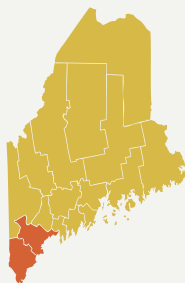
» Projected Climate Risks

VERY HIGH HIGH MEDIUM LOW NO RISK

WATER STRESS

Maine has experienced abnormally dry days in the early 2000s and over the past 10 years, but precipitation is expected to be above normal over this century.
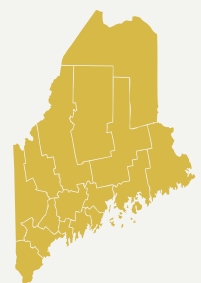
HEAT STRESS

Temperatures have risen about 3.5°F since the beginning of the 20th century, resulting in warmer nights, shorter freeze-free seasons, and longer growing seasons.
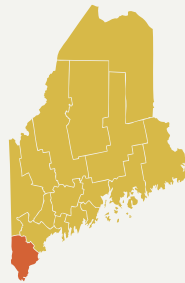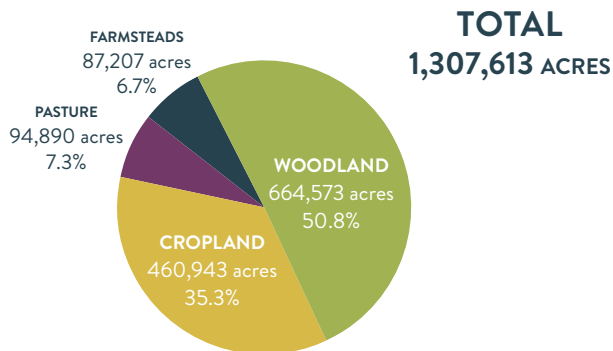
WILDFIRE

Large wildfires are not very common in Maine: fewer than 500 fires, covering about 300 acres occurred in 2023.
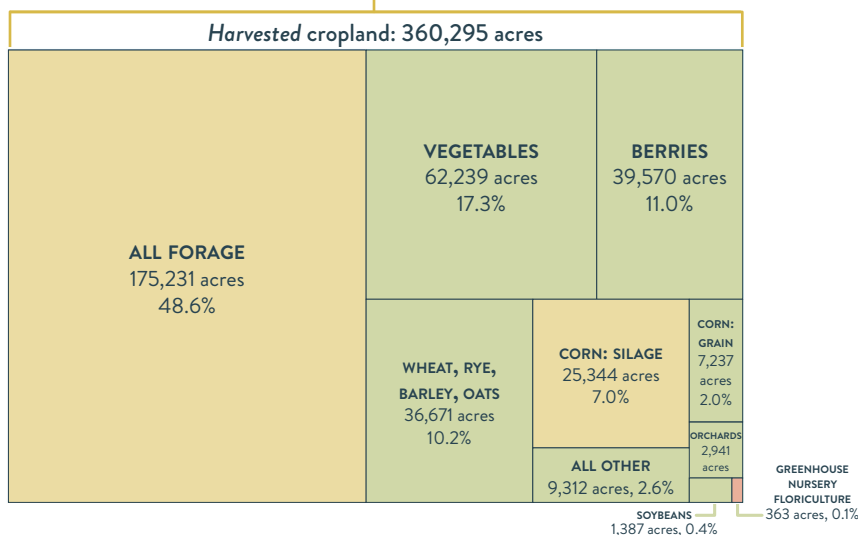
Source: Stuart A. Thompson and Yaryna Serkez, September 18, 2020, "Every Place Has Its Own Climate Risk. What Is It Where You Live?," *The New York Times.* Based on data from Four Twenty Seven.

Agriculture

What kinds of agricultural products does Maine grow/raise? How have land uses changed over time?

» **Land in Agriculture**

TOTAL
1,307,613 ACRES

FARMSTEADS
87,207 acres
6.7%

PASTURE
94,890 acres
7.3%

WOODLAND
664,573 acres
50.8%

CROPLAND
460,943 acres
35.3%

#8 In 2021, Maine was the 8th largest grower of potatoes in the US

-69% Cropland decreased from 1.49 million acres in 1945 to 461,000 acres in 2017

-78% Pastureland decreased from 439,000 acres in 1945 to 95,000 acres in 2017

Harvested cropland: 360,295 acres

ALL FORAGE
175,231 acres
48.6%

VEGETABLES
62,239 acres
17.3%

BERRIES
39,570 acres
11.0%

WHEAT, RYE, BARLEY, OATS
36,671 acres
10.2%

CORN: SILAGE
25,344 acres
7.0%

CORN: GRAIN
7,237 acres
2.0%

ORCHARDS
2,941 acres

ALL OTHER
9,312 acres, 2.6%

SOYBEANS
1,387 acres, 0.4%

GREENHOUSE NURSERY FLORICULTURE
363 acres, 0.1%

END USES

ANIMAL FEED

EDIBLE

LANDSCAPING

Acreage for animal feed equaled **55.6% (200,575 acres)** of harvested cropland and 15.3% of total land in agriculture. Maine already has the largest amount of acreage devoted to vegetables and berries, and the second most for fruit, and it may have the most capacity to boost vegetable, berry, fruit, and grain production in the region.

» **Agricultural Sales, 2017**

TOTAL $672,265,500
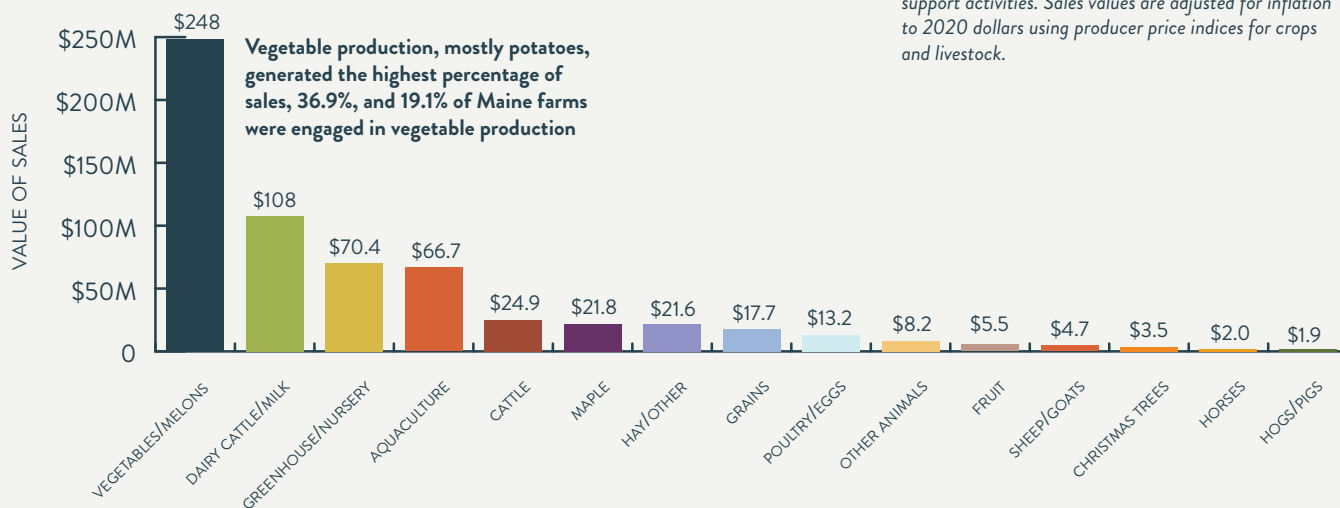
Note: Agriculture sales in this table do not include support activities. Sales values are adjusted for inflation to 2020 dollars using producer price indices for crops and livestock.

VALUE OF SALES

$250M
$200M
$150M
$100M
$50M
0

Vegetable production, mostly potatoes, generated the highest percentage of sales, 36.9%, and 19.1% of Maine farms were engaged in vegetable production

$248 — VEGETABLES/MELONS
$108 — DAIRY CATTLE/MILK
$70.4 — GREENHOUSE/NURSERY
$66.7 — AQUACULTURE
$24.9 — CATTLE
$21.8 — MAPLE
$21.6 — HAY/OTHER
$17.7 — GRAINS
$13.2 — POULTRY/EGGS
$8.2 — OTHER ANIMALS
$5.5 — FRUIT
$4.7 — SHEEP/GOATS
$3.5 — CHRISTMAS TREES
$2.0 — HORSES
$1.9 — HOGS/PIGS

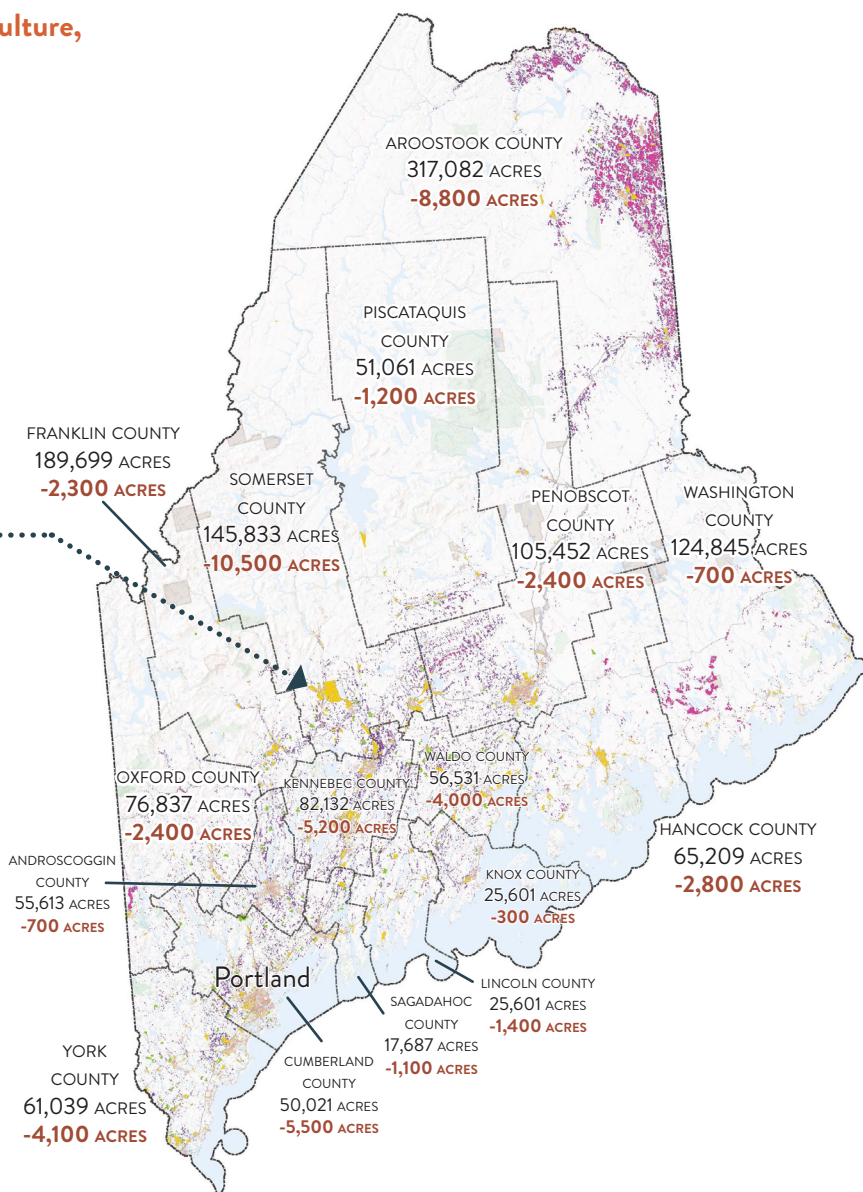## Projected Changes in Land in Agriculture, Business as Usual Scenario

TOTAL

1,307,613 ACRES EXISTING ACREAGE

-53,400 ACRES BUSINESS AS USUAL SCENARIO

LAND USES

- **CULTIVATED CROPS**
- **PASTURE/HAY**
- **EASEMENT**
- **DEVELOPED LAND**
- **PROJECTED URBAN AND HIGHLY DEVELOPED AND LOW-DENSITY RESIDENTIAL**

An analysis from the American Farmland Trust (AFT) estimates that Maine could lose an additional **53,400 acres** by 2040 under a "Business as Usual" development scenario and **72,500 acres** under a "Runaway Sprawl" scenario.

AFT projects that **Somerset, Aroostook, and Cumberland** counties will experience the biggest decreases in land in agriculture.
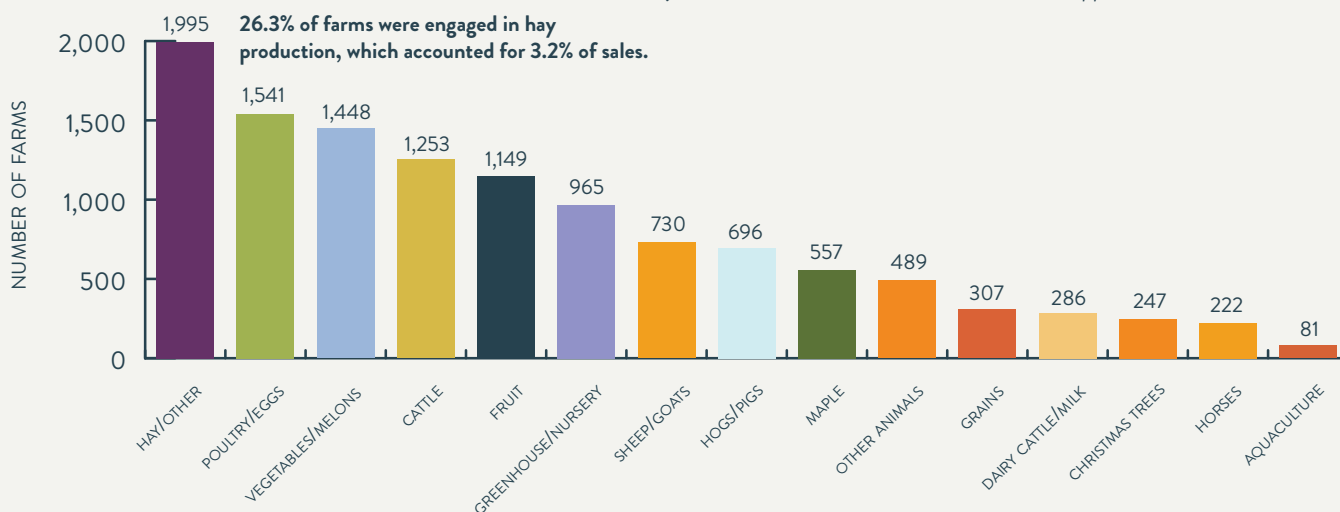
Source: American Farmland Trust, Farms Under Threat 2040: Choosing an Abundant Future

AROOSTOOK COUNTY
317,082 ACRES
-8,800 ACRES

PISCATAQUIS COUNTY
51,061 ACRES
-1,200 ACRES

FRANKLIN COUNTY
189,699 ACRES
-2,300 ACRES

SOMERSET COUNTY
145,833 ACRES
-10,500 ACRES

PENOBSCOT COUNTY
105,452 ACRES
-2,400 ACRES

WASHINGTON COUNTY
124,845 ACRES
-700 ACRES

OXFORD COUNTY
76,837 ACRES
-2,400 ACRES

KENNEBEC COUNTY
82,132 ACRES
-5,200 ACRES

WALDO COUNTY
56,531 ACRES
-4,000 ACRES

HANCOCK COUNTY
65,209 ACRES
-2,800 ACRES

ANDROSCOGGIN COUNTY
55,613 ACRES
-700 ACRES

KNOX COUNTY
25,601 ACRES
-300 ACRES

Portland

LINCOLN COUNTY
25,601 ACRES
-1,400 ACRES

SAGADAHOC COUNTY
17,687 ACRES
-1,100 ACRES

YORK COUNTY
61,039 ACRES
-4,100 ACRES

CUMBERLAND COUNTY
50,021 ACRES
-5,500 ACRES

#1 Aroostook County had the most land in agriculture of any county in New England in 2017, 317,082 acres. Aroostook County also had the highest sales value of any New England county, over $213 million.

Number of Farms Engaged in Each Category, 2017

TOTAL 7,600 FARMS

Note: the number of farms has decreased since 2017.

26.3% of farms were engaged in hay production, which accounted for 3.2% of sales.

Source: USDA 2017 Census of Agriculture

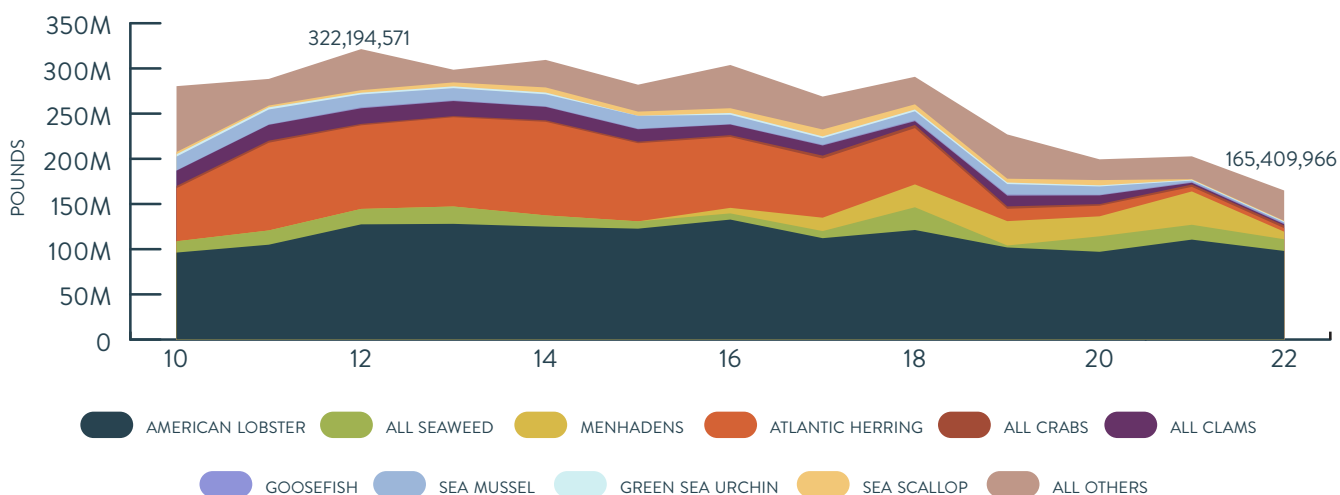| Category	Number of Farms
HAY/OTHER	1,995
POULTRY/EGGS	1,541
VEGETABLES/MELONS	1,448
CATTLE	1,253
FRUIT	1,149
GREENHOUSE/NURSERY	965
SHEEP/GOATS	730
HOGS/PIGS	696
MAPLE	557
OTHER ANIMALS	489
GRAINS	307
DAIRY CATTLE/MILK	286
CHRISTMAS TREES	247
HORSES	222
AQUACULTURE	81

NUMBER OF FARMS

Fisheries

What kinds of seafood products does Maine harvest?

68% Dozens of species are caught or harvested by Maine fishermen/lobstermen, but lobster accounts for the majority of pounds landed (59%) and sales (68% in 2022). Lobster harvests have been relatively consistent over the past 12 years, but have declined since 2016. Warmer ocean temperatures are expected to increasingly impact production. Maine also has significant aquaculture production, equal to nearly $49 million in 2020, mostly Atlantic salmon.

⟫ Pounds of Commercial Seafood Landings

POUNDS

350M
300M
250M
200M
150M
100M
50M
0

322,194,571

165,409,966

10   12   14   16   18   20   22

● AMERICAN LOBSTER   ● ALL SEAWEED   ● MENHADENS   ● ATLANTIC HERRING   ● ALL CRABS   ● ALL CLAMS
● GOOSEFISH   ● SEA MUSSEL   ● GREEN SEA URCHIN   ● SEA SCALLOP   ● ALL OTHERS

Source: NOAA Fisheries and the Atlantic Coastal Cooperative Statistics Program

⟫ Value of Commercial Seafood Landings

VALUE OF LANDINGS

$1.2B
$1.0B
$0.8B
$0.6B
$0.4B
$0.2B
0

IMPACT
OF COVID
PANDEMIC

$1,030,161,659

$575,268,346

10   12   14   16   18   20   22

● AMERICAN LOBSTER   ● AMERICAN EEL   ● ALL CLAMS   ● SEA SCALLOP   ● ALL OYSTERS   ● BLOODWORMS   ● SEA MUSSEL
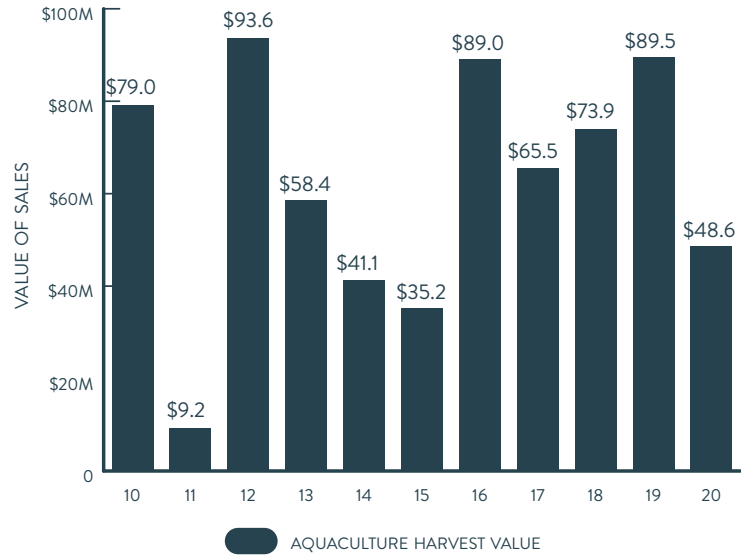● MENHADENS   ● GREEN SEA URCHIN   ● ATLANTIC HERRING   ● ALL CRABS   ● GOOSEFISH   ● ALL OTHERS
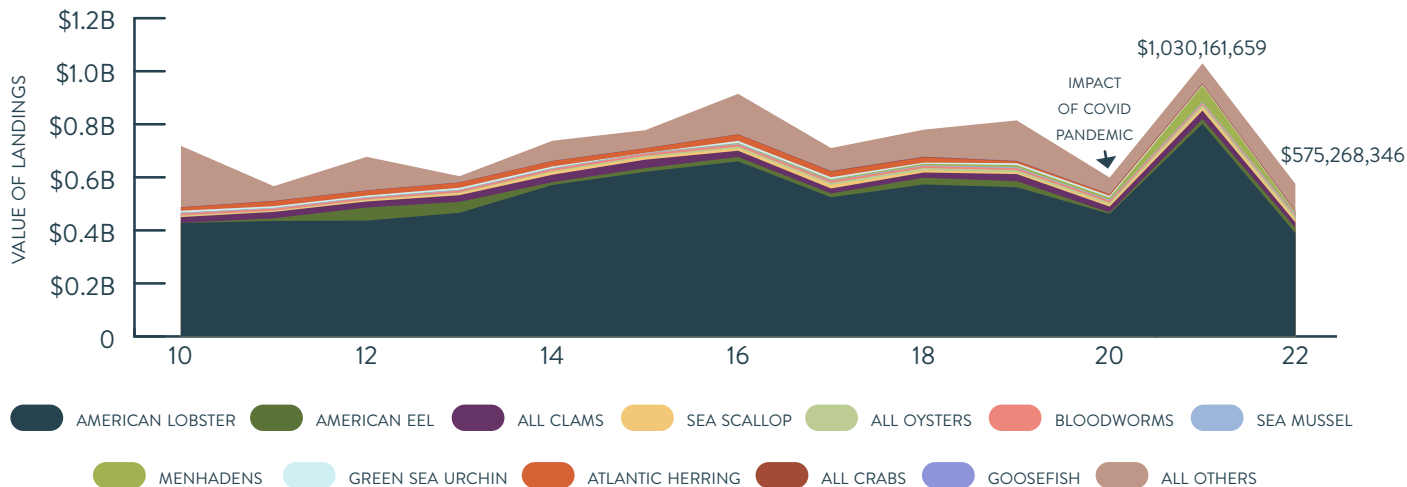
Source: NOAA Fisheries and the Atlantic Coastal Cooperative Statistics Program. Depicted in 2022 dollars.

Aquaculture

As of 2021, Maine had over 180 active aquaculture leases. Farm-raised Atlantic salmon accounts for the majority of the value of aquaculture harvests, but production data were supressed from 2011 to 2020. For example, in 2020, harvest values for American/Eastern oysters, blue mussels, and marine algae equaled $9.9 million (20%). This means that Atlantic salmon accounted for the remaining value $38.7 million (80%).

Aquaculture Harvest Value

VALUE OF SALES

Year	Value
10	$79.0
11	$9.2
12	$93.6
13	$58.4
14	$41.1
15	$35.2
16	$89.0
17	$65.5
18	$73.9
19	$89.5
20	$48.6

⬛ AQUACULTURE HARVEST VALUE

Source: State of Maine Department of Marine Resources

Food Waste

How much food waste is landfilled in Maine?

A 2011 "Waste Characterization" study found that food waste (vegetative and protein) is the most common material in Maine's residential waste stream at about 331,000 tons, or 661.5 *million* pounds.

Landfilled Food Waste

1,187,265 TONS TOTAL MSW
330,772 TONS FOOD WASTE

Food waste
330,772 tons
27.9%

Other organics
183,076 tons
15.4%

Plastic
159,568 tons
13.4%

Paper
303,584 tons
25.6%

Textiles
50,577 tons
4.3%

Metal
38,705 tons
3.3%

Special waste
1.7%

Construction and demolition
39,773 tons
3.4%

Glass
58,512 tons
2.7%

Bulky waste
0.9%
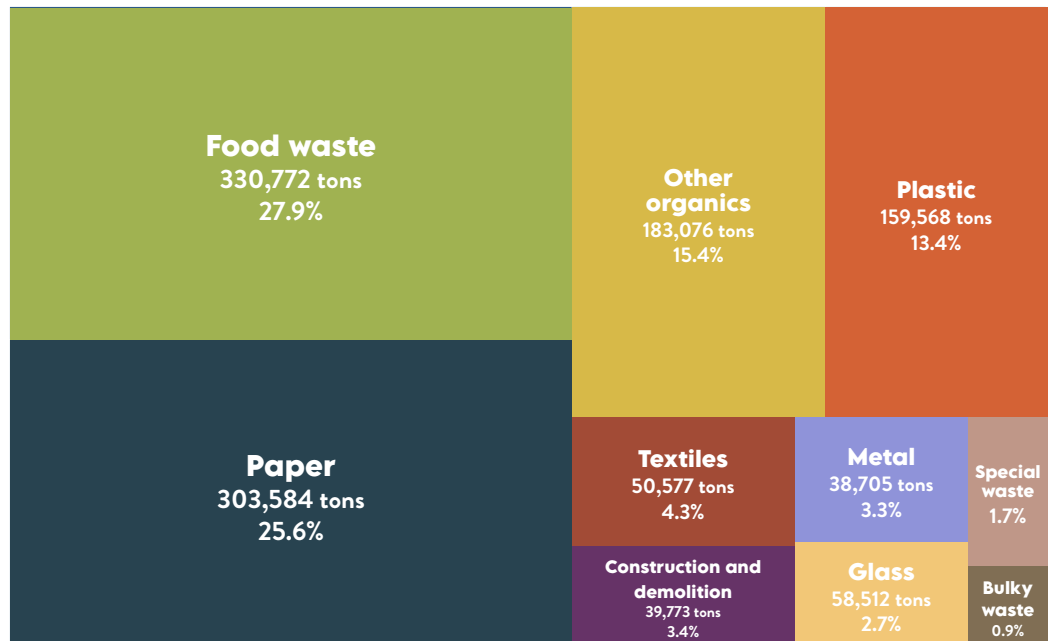
Source: George K. Criner and Travis L. Blackmer, 2011, 2011 Maine Residential Waste Characterization Study

Key Maine Strengths, Weaknesses, Opportunities, and Threats

STRENGTHS

Generational experience and knowledge in farming and fishing

Strong network of technical and business assistance providers

Strong state and community conservation programs for working farmland and waterfront

State legislation to expand subsidies for local foods in school lunch programs and strong state and nonprofit farm to school support

Strong farm to food pantry relationships and programs

WEAKNESSES

Lack of statewide definition of "local food" in Maine statute, institutions and food distributors

High rates of food insecurity and significant disparities in healthy food access

Minimum wage excludes farmworkers and is below estimated living wage for the state

Access to markets, cost-effective infrastructure such as transportation, and food hubs for very small, geographically dispersed farms

OPPORTUNITIES

Growing food-related sectors in Maine including greenhouses, aquaculture, and value-added food and beverage products

About 20% of farms grow vegetables, a crop important to a resilient diet

Expanded investments in agriculture, seafood, and food value chain businesses

Upcoming state investments in electric grid upgrades for rural and energy intensive industries

Tech innovations in workforce automation and workforce development programs for jobs in the food value chain

THREATS

Real estate development pressure and land use changes that conflict with maintaining working farms and waterfronts

Effects of climate change on growing conditions and seafood production

Very high per capita food expenditures

Tight labor market restricts growth and the viability of some businesses

Declining number of mid-sized farms

Next Steps in 2030: What Can Maine do to Meet the 30% by 2030 Goal?

To help meet the region's 30x2030 goal, Maine needs to strengthen its local food system while also working with policymakers and leaders in the region to develop strategies that leverage regional markets and build supply chains to help bolster the viability of Maine food businesses and increase regional food self reliance. In Maine, the state needs to aggressively implement strategies from recent state government planning initiatives, including:

» Investments that expand Maine's food infrastructure such as processing, storage capacity and distribution networks

» Investments aimed at lowering energy costs for food infrastructure businesses, farmers, fishermen and residents

» Promoting personal and regional food self-provisioning and self-sufficiency by protecting and restoring farmland and fisheries and encouraging urban agriculture and community gardens

» Including food supply chain workers in wage and workplace protections to prevent food insecurity among food system workers

» Ensuring that food system workers have adequate access to mental health resources and supports.

Additional strategies supporting the 30% goal include:

» Ensuring that evaluation processes and awards for public investments in food infrastructure address historical inequities

» Building systems for supply chain mapping and data collection to build capacity for stronger systems of support in connecting small and mid-sized farmers and producers to new markets

» Encouraging planning for community food supply chain resiliency in regional, community economic development and emergency management planning efforts

» Support for initiatives that create opportunities for small and mid-sized food supply chain businesses, farmers and fishermen to develop collaborative working relationships

» Support for research and development on sustainable agriculture, fisheries and food production

» Develop a statewide planning process to establish a state food system plan

Additional References

» Maine Economic Development Strategy 2020-2029: A Focus on Talent and Innovation (November 2019)
» Everyone at the Table: Maine's Roadmap to End Hunger by 2030
» A Four-Year Plan for Climate Action: Maine Won't Wait (December 2020)
» Permanent Commission Recommendations to the Maine Legislature (2020)