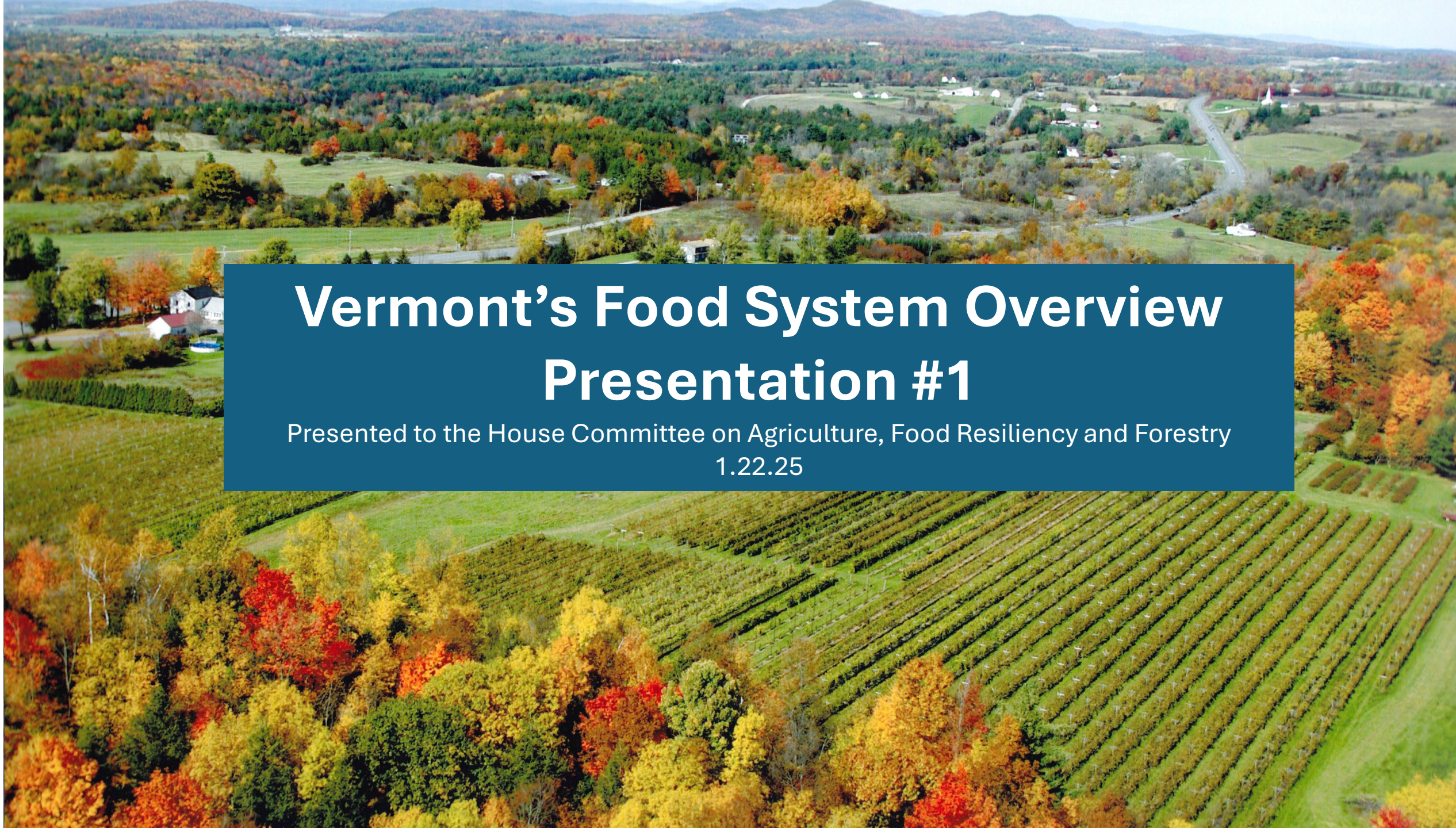


# Vermont's Food System Overview Presentation #1

Presented to the House Committee on Agriculture, Food Resiliency and Forestry
1.22.25

# What we mean by Food System

# 15 Strategic Goals

## SUSTAINABLE ECONOMIC DEVELOPMENT GOALS

1. Food system economic output, employment, and establishments in Vermont will increase.
2. Demand for Vermont food will increase.
3. Vermont's production portfolio is more diverse, farm and food businesses of all types will increase their economic viability, and businesses have equitable access to capital and to production, processing, aggregation, and distribution infrastructure appropriate to their needs.
4. Vermont food system jobs provide livable wages, safe, healthy, and supportive workplace conditions, and access to health care and other benefits.
5. Vermont farms and food system businesses have sufficient, diverse, and reliable employees, and there are accessible and equitable opportunities in Vermont to gain the knowledge and skills for food system careers.

## ENVIRONMENTAL SUSTAINABILITY GOALS

6. Vermont farm and food businesses will increase carbon sequestration and reduce food system-related greenhouse gas emissions, and are able to adapt to climatic changes due to global warming, including floods, droughts, extreme storms, and pest and disease pressures.
7. Vermont farm stewardship is increasing ecological diversity and improving soil and water quality, and farm stewards are supported, compensated, and recognized for their positive contributions to the environment and public good.
8. Vermont's agricultural land remains in productive agricultural use, access to that land is more affordable and equitable, and land-use planning decisions maintain and promote a strong and viable food system.
9. Edible food, food scraps, and other food residuals are used for their highest purpose, and not considered waste.

Vermont Agricultural and Food System Strategic Goals

## HEALTHY LOCAL FOOD FOR ALL VERMONTERS GOALS

10. The amount of Vermont-grown food that fulfills the dietary and cultural needs of people in Vermont will increase.
11. All people in Vermont increasingly have the financial resources to access local food, including through programs that provide support for purchasing local food.
12. All people in Vermont are able to access locations in which local food is sold, served, or provided.
13. All people in Vermont can access the knowledge, skills, and resources to select, grow, hunt, fish, forage, process, store, and prepare local food.
14. Vermont's food system is resilient and able to provide adequate and accessible healthy local food in the face of emergencies—including climate-related natural disasters.

## RACIAL EQUITY GOAL

15. Food system organizations and stakeholders prioritize racial equity and actions to eradicate structural racism in their work, are accountable to Black, Indigenous, People of Color (BIPOC) leadership, and support BIPOC participation and representation.

Vermont Agricultural and Food System Strategic Goals

# Buckle Up!

# SUSTAINABLE ECONOMIC DEVELOPMENT GOALS

1. Food system economic output, employment, and establishments in Vermont will increase.

2. Demand for Vermont food will increase.

3. Vermont's production portfolio is more diverse, farm and food businesses of all types will increase their economic viability, and businesses have equitable access to capital and to production, processing, aggregation, and distribution infrastructure appropriate to their needs.

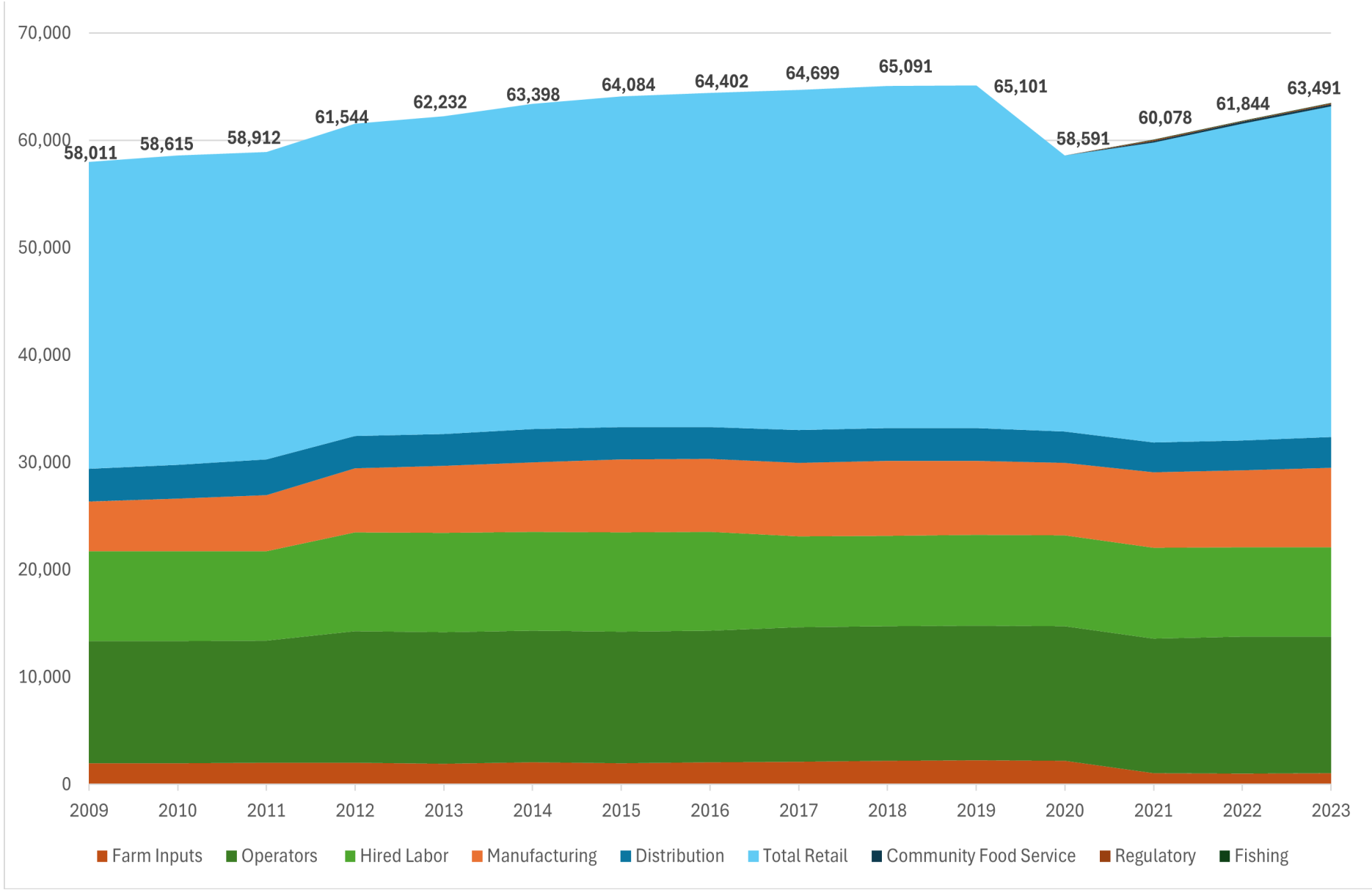
4. Vermont food system jobs provide livable wages, safe, healthy, and supportive workplace conditions, and access to health care and other benefits.

5. Vermont farms and food system businesses have sufficient, diverse, and reliable employees, and there are accessible and equitable opportunities in Vermont to gain the knowledge and skills for food system careers.

# **ECONOMICS:** TOTAL ECONOMIC OUTPUT, 2022

| Industry | 2022 Sales | Industry Aggregate |
|---|---|---|
| **Production & Processing** | | $4,321,520,000 |
| Agriculture | $1,033,194,000 | |
| Food Manufacturing | $3,073,866,000 | |
| Beverage Manufacturing | $214,460,000 | |
| **Distribution** | | $3,606,468,000 |
| Wholesaling + Distribution | $3,606,468,000 | |
| **Retail & Food Service** | | $3,598,468,000 |
| Stores | $2,214,468,000 | |
| Food Services + Drinking Places | $1,384,000,000 | |
| ***Total*** | **$11,526,456,000** | |

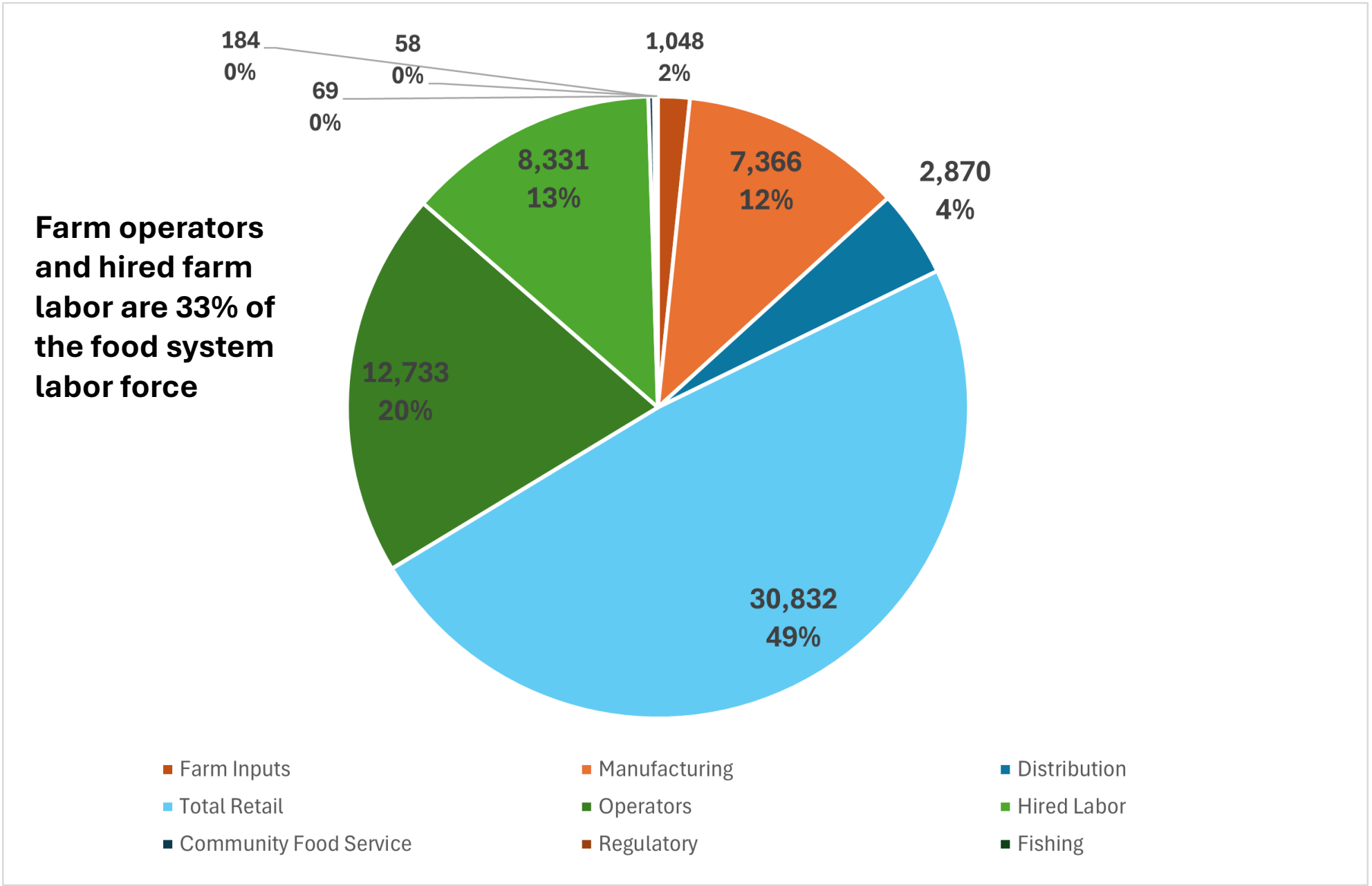
# **ECONOMICS:** TOTAL FOOD SYSTEM EMPLOYMENT, 2009-2023



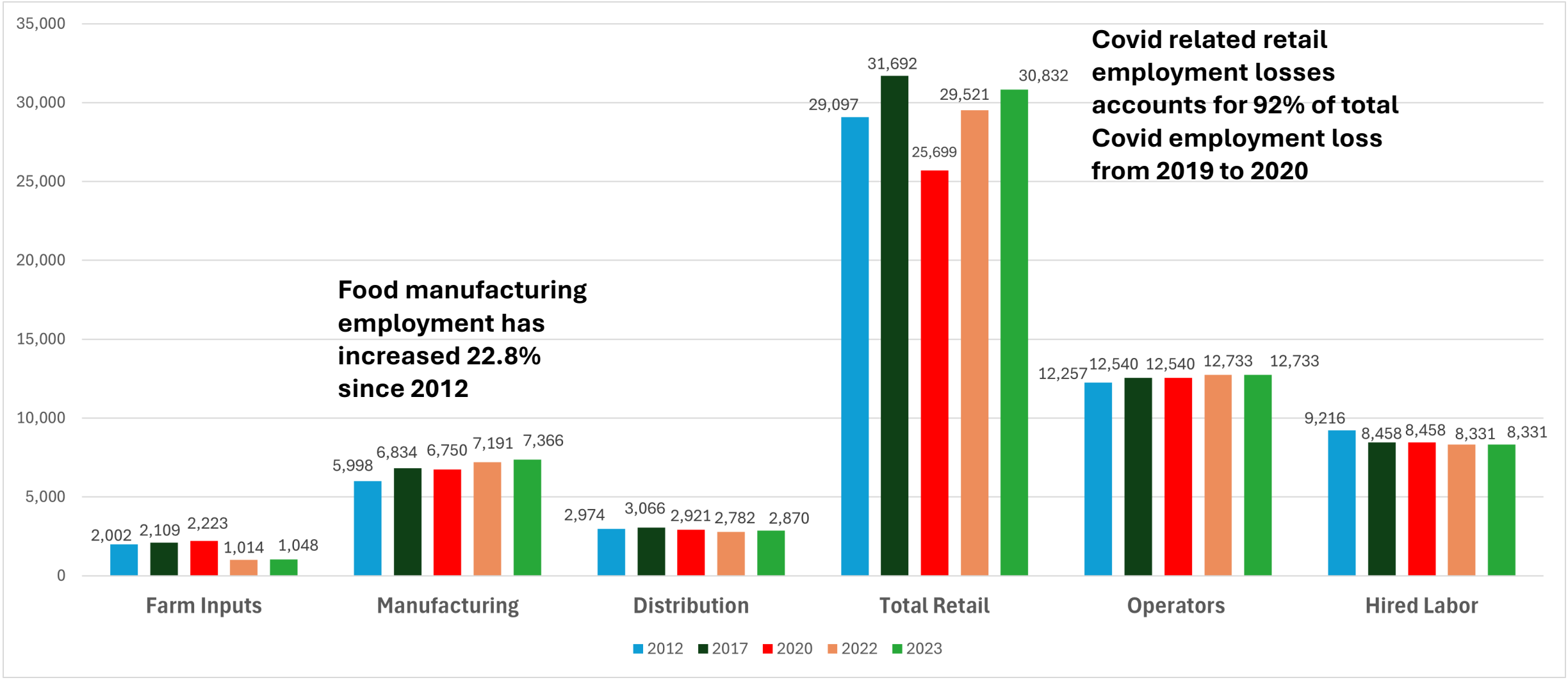

- **9.4% increase** in employment since 2009
- **10% decrease** from 2019 to 2020 due to Covid-19
- 4,900 net new jobs added since since peak decline from Covid-19, **an 8.4% increase**.

# **ECONOMICS:** FOOD SYSTEM EMPLOYMENT 2023

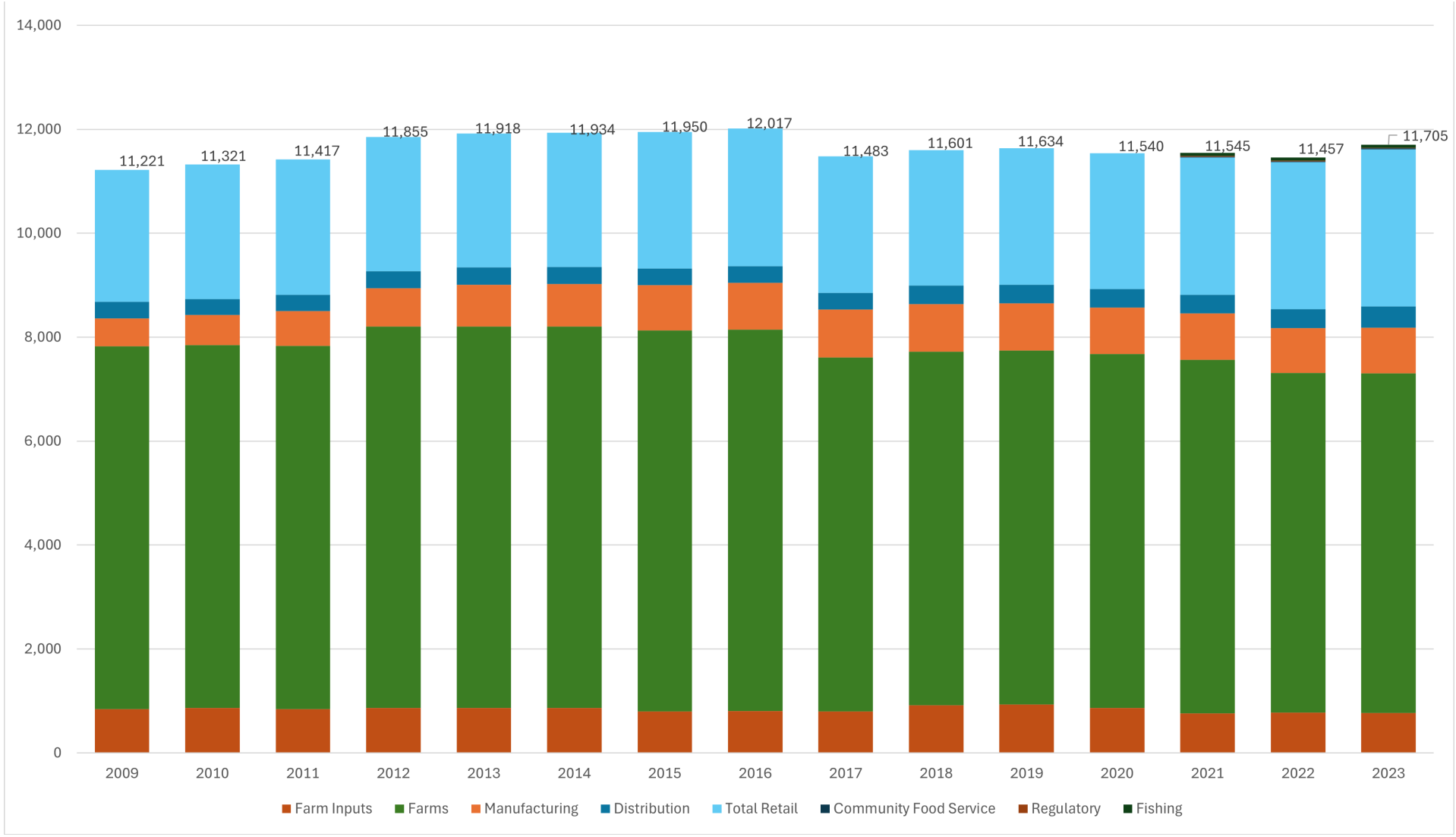
**Farm operators and hired farm labor are 33% of the food system labor force**



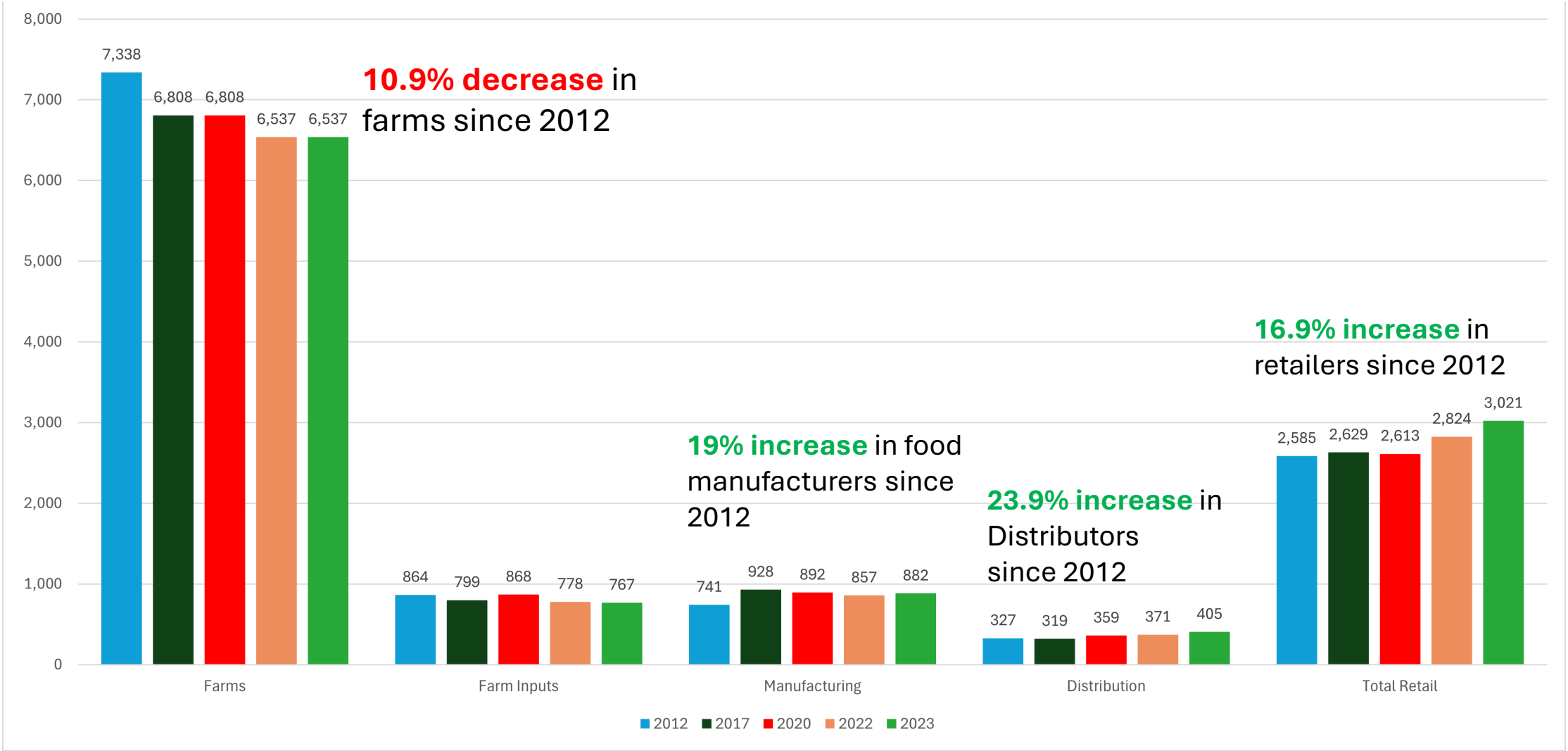
# **ECONOMICS:** FOOD SYSTEM EMPLOYMENT BY CATEGORY 2012-2023



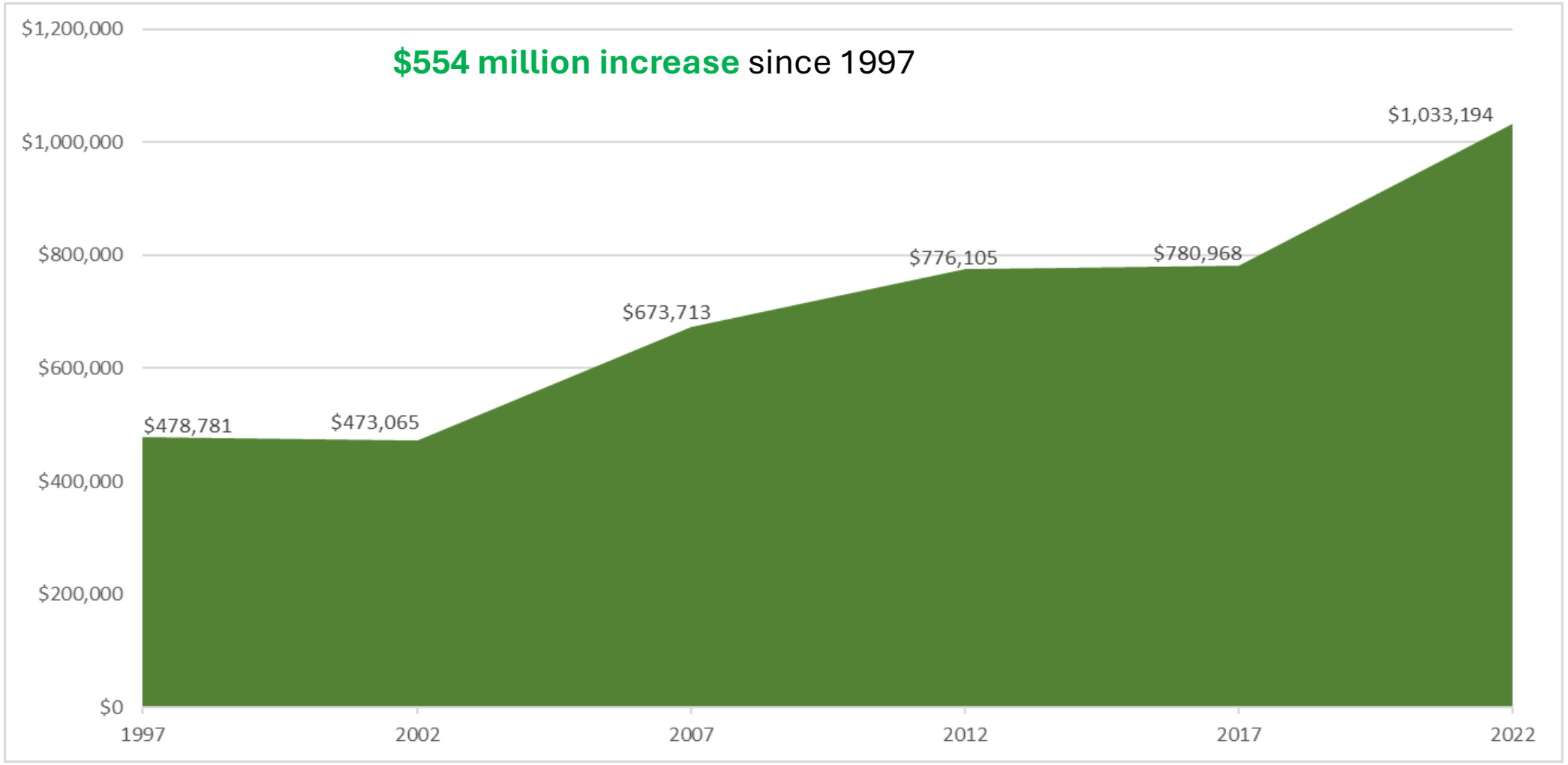
# **ECONOMICS:** FOOD SYSTEM ESTABLISHMENTS 2009-2023



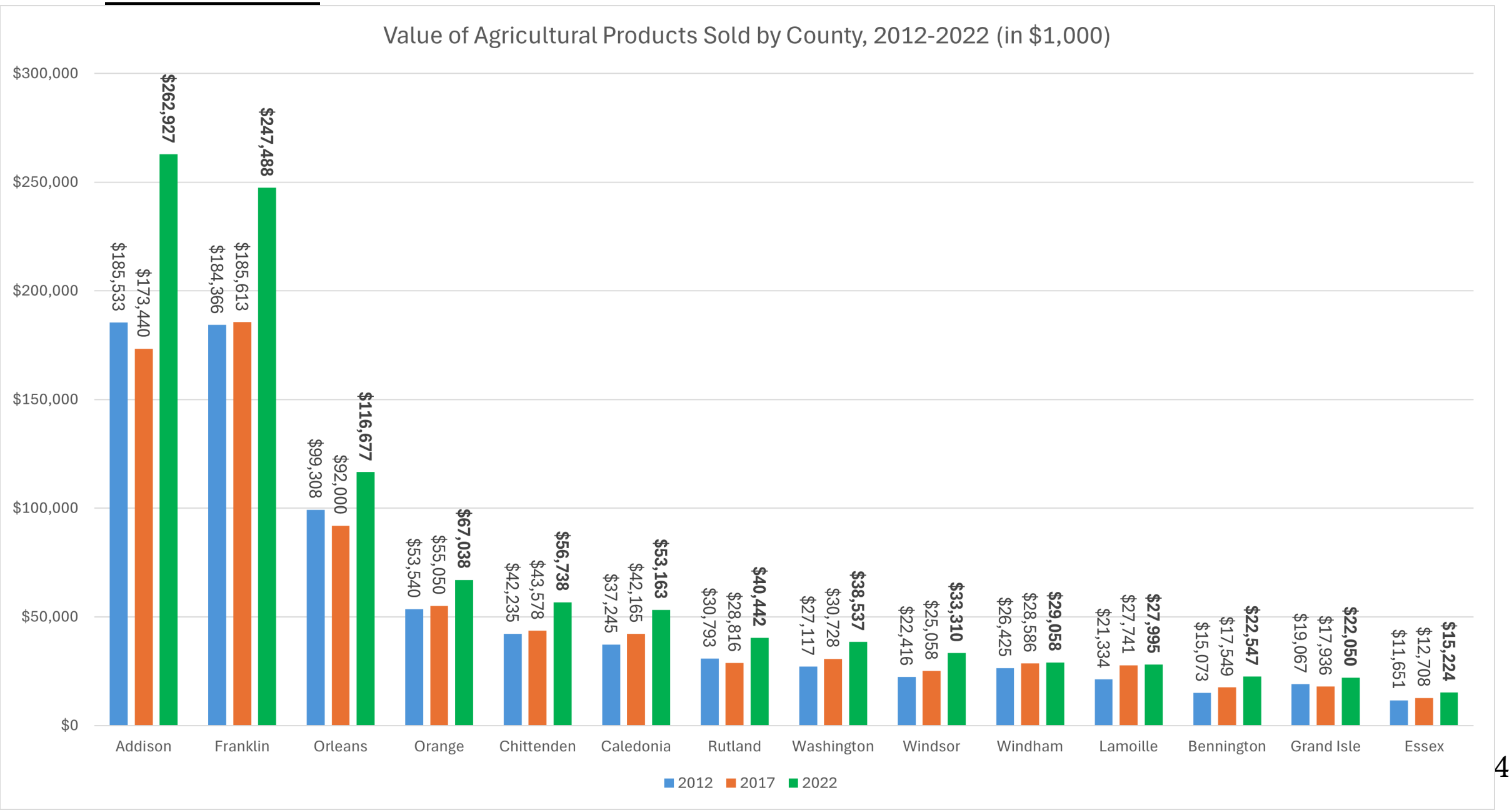

4.3% increase in establishments since 2009


8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
7,338
6,808
6,808
6,537
6,537
10.9% decrease in farms since 2012
864
799
868
778
767
741
928
892
857
882
19% increase in food manufacturers since 2012
327
319
359
371
405
23.9% increase in Distributors since 2012
2,585
2,629
2,613
2,824
3,021
16.9% increase in retailers since 2012
Farms
Farm Inputs
Manufacturing
Distribution
Total Retail
2012
2017
2020
2022
2023

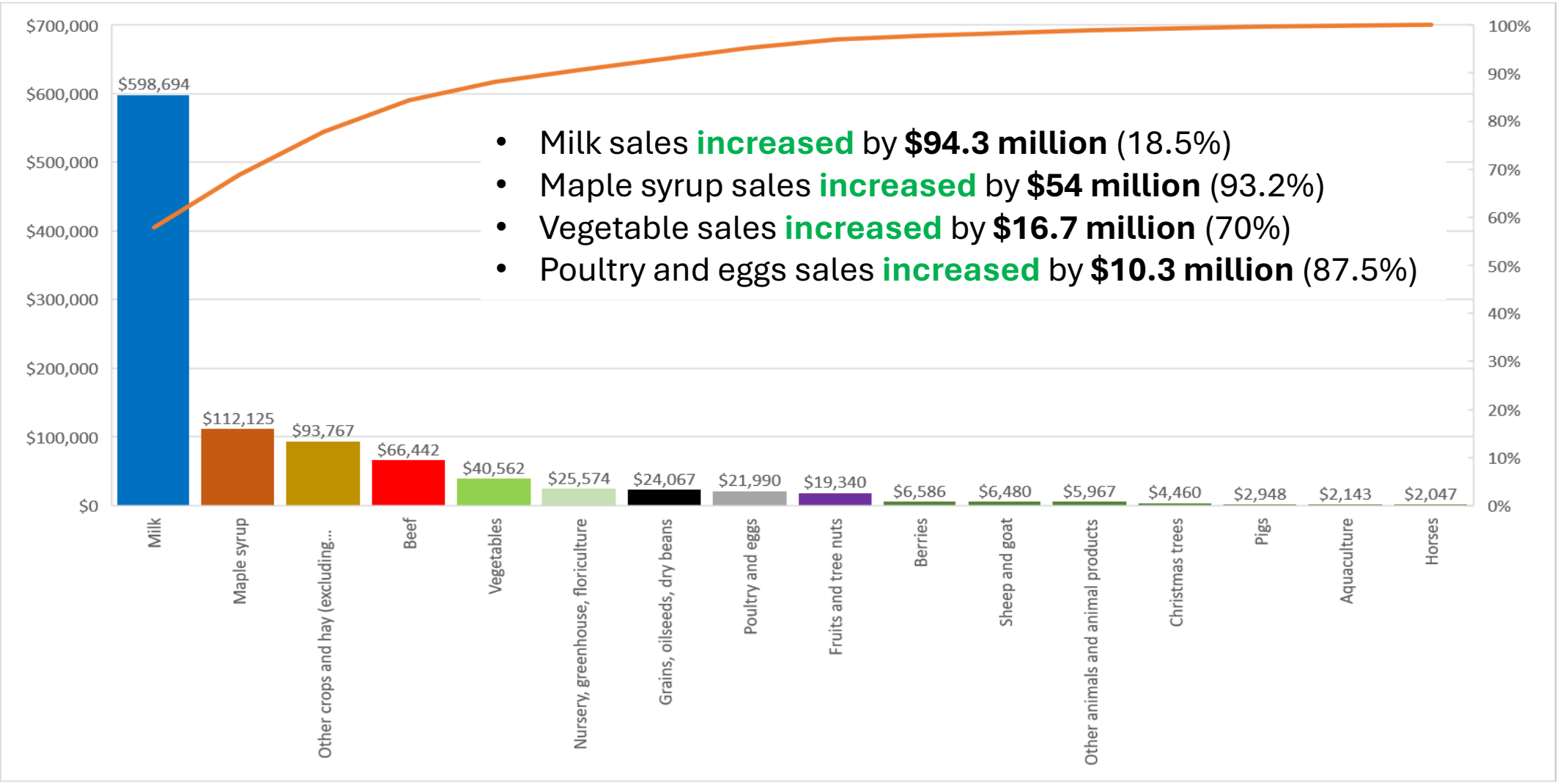
## **FARM GATE SALES:** VALUE OF PRODUCTS SOLD, 1997-2022 (IN $1,000)



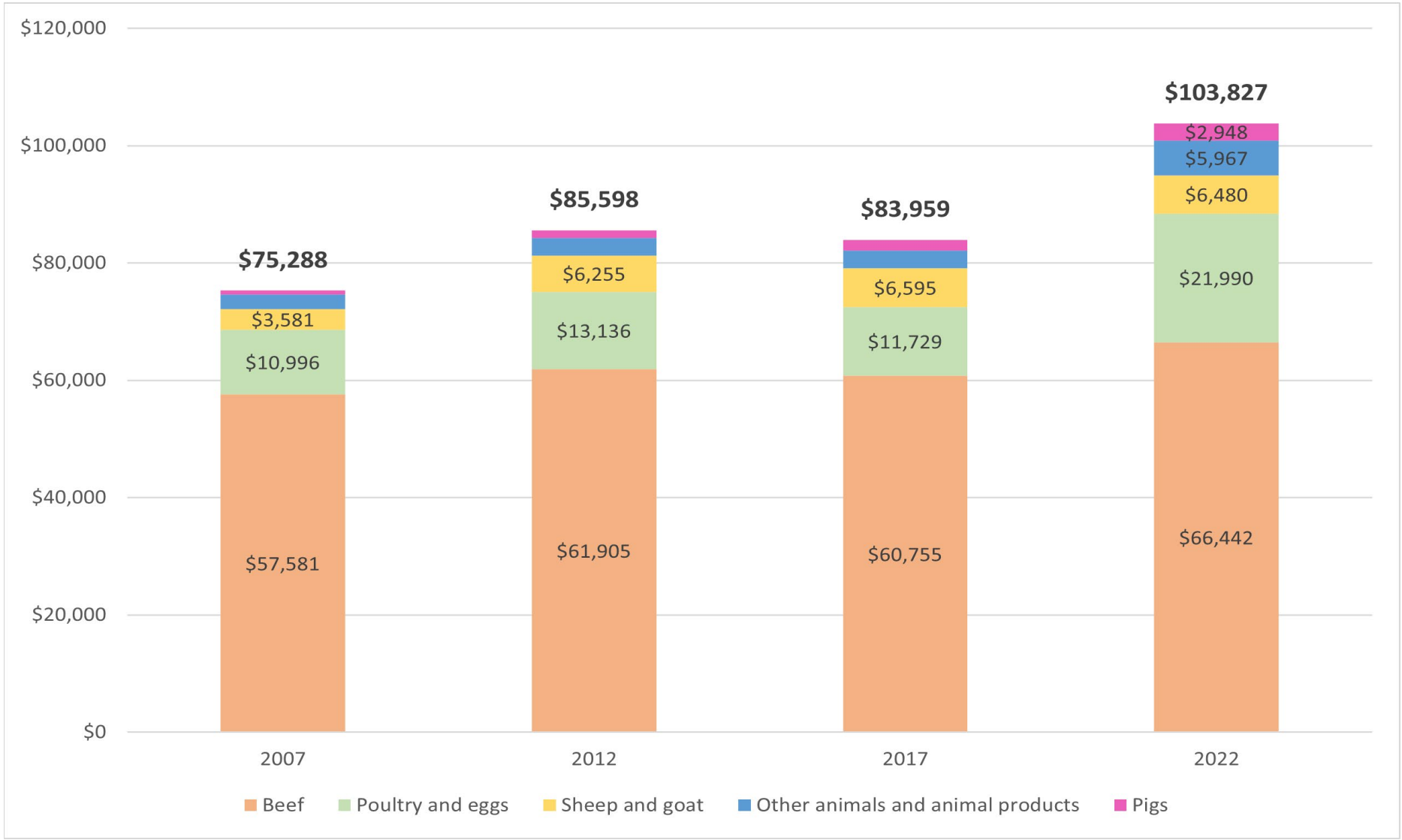
# **FARM GATE SALES:** VALUE OF PRODUCTS SOLD, BY COUNTY



# **FARM GATE SALES:** VALUE OF SALES BY COMMODITY/COMMODITY GROUP, 2022 (IN $1,000)

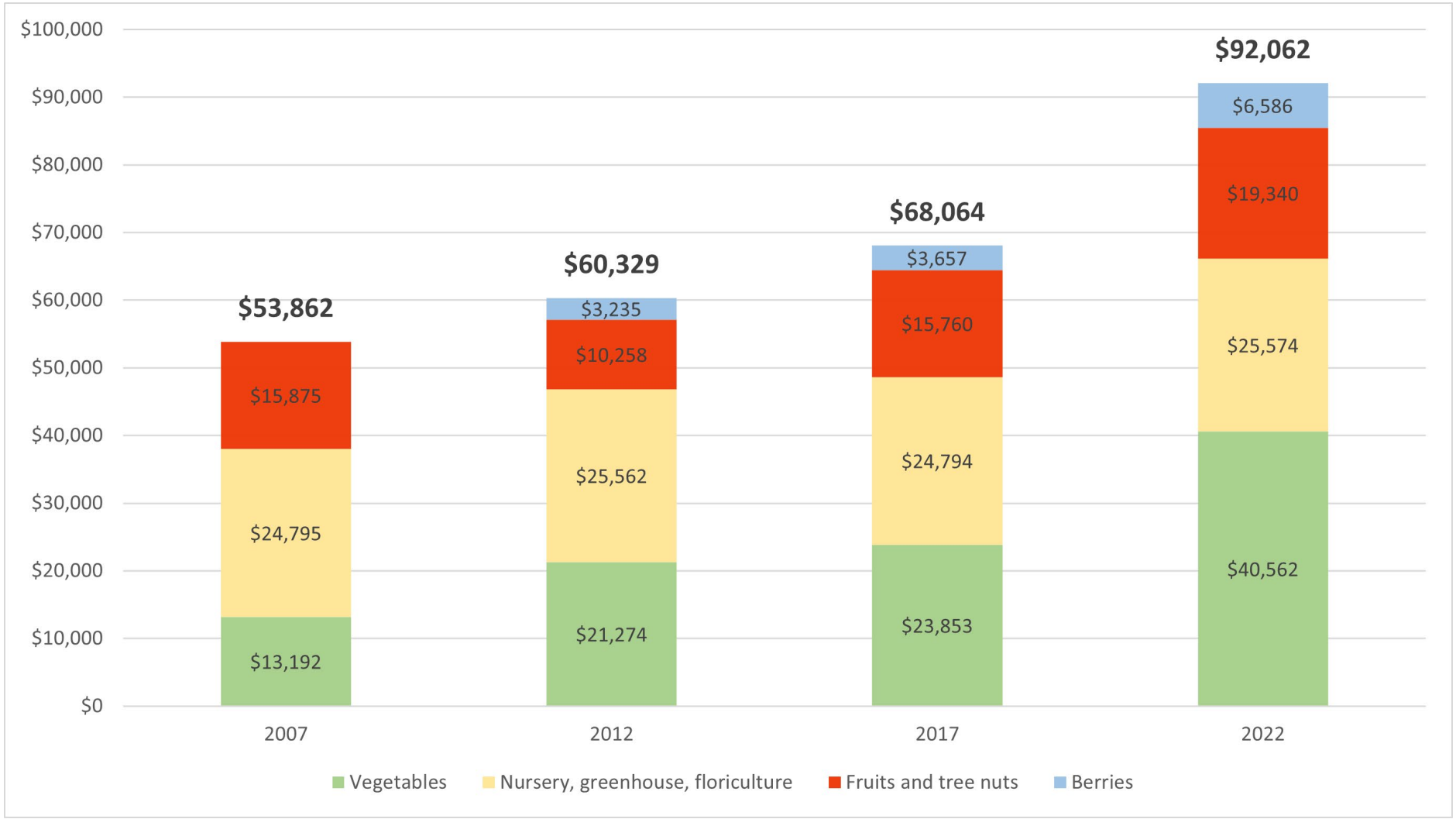


## **FARM GATE SALES FOCUS:** NON-DAIRY LIVESTOCK, 2007-2022



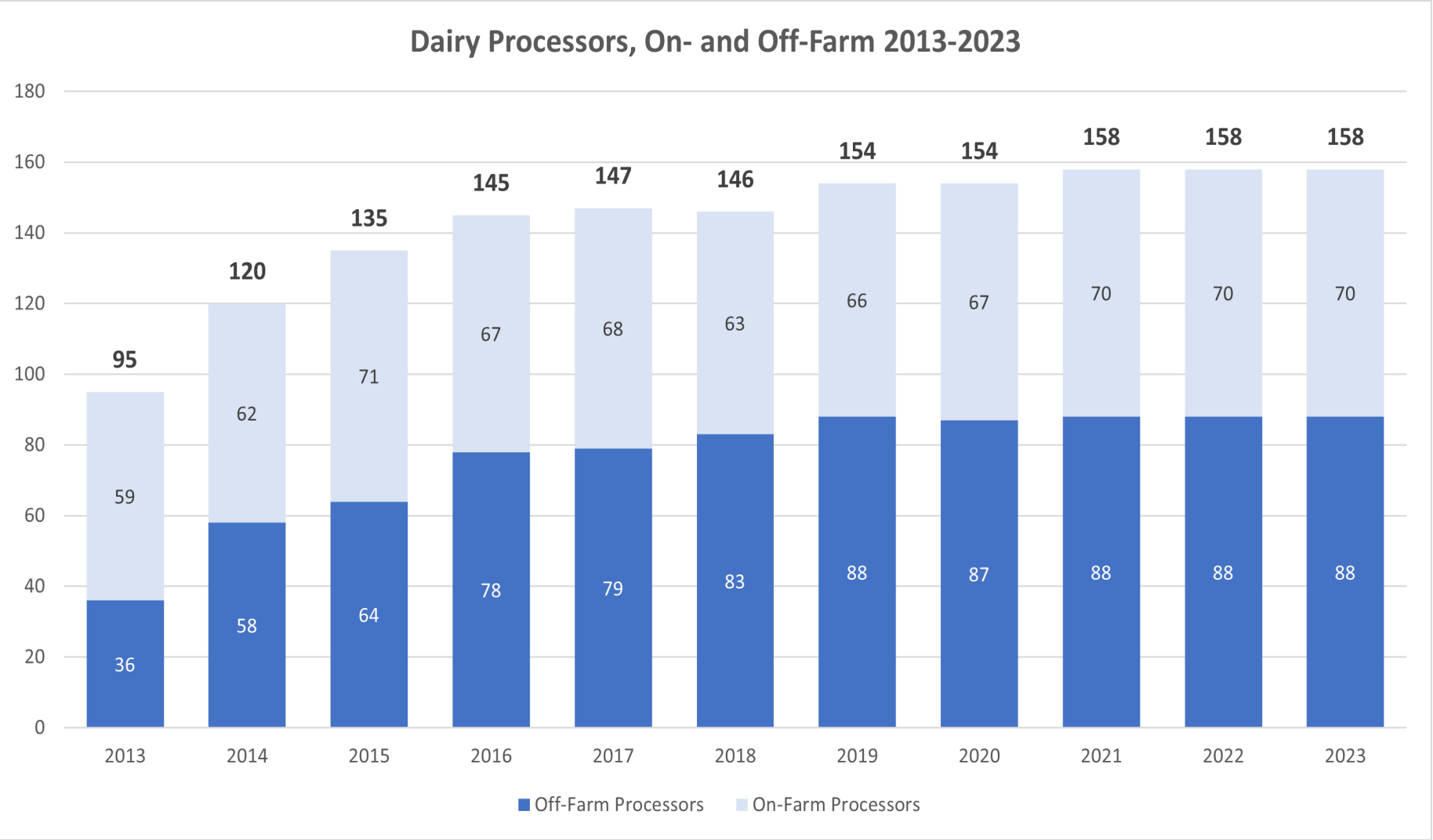

Poultry and egg sales have **nearly doubled** since 2007 (and 2017)!

# **FARM GATE SALES FOCUS:** PRODUCE & NURSERY/FLORICULTURE, 2007-2022




Vegetable sales have **more than tripled** since 2007**, increasing** by $27 million!

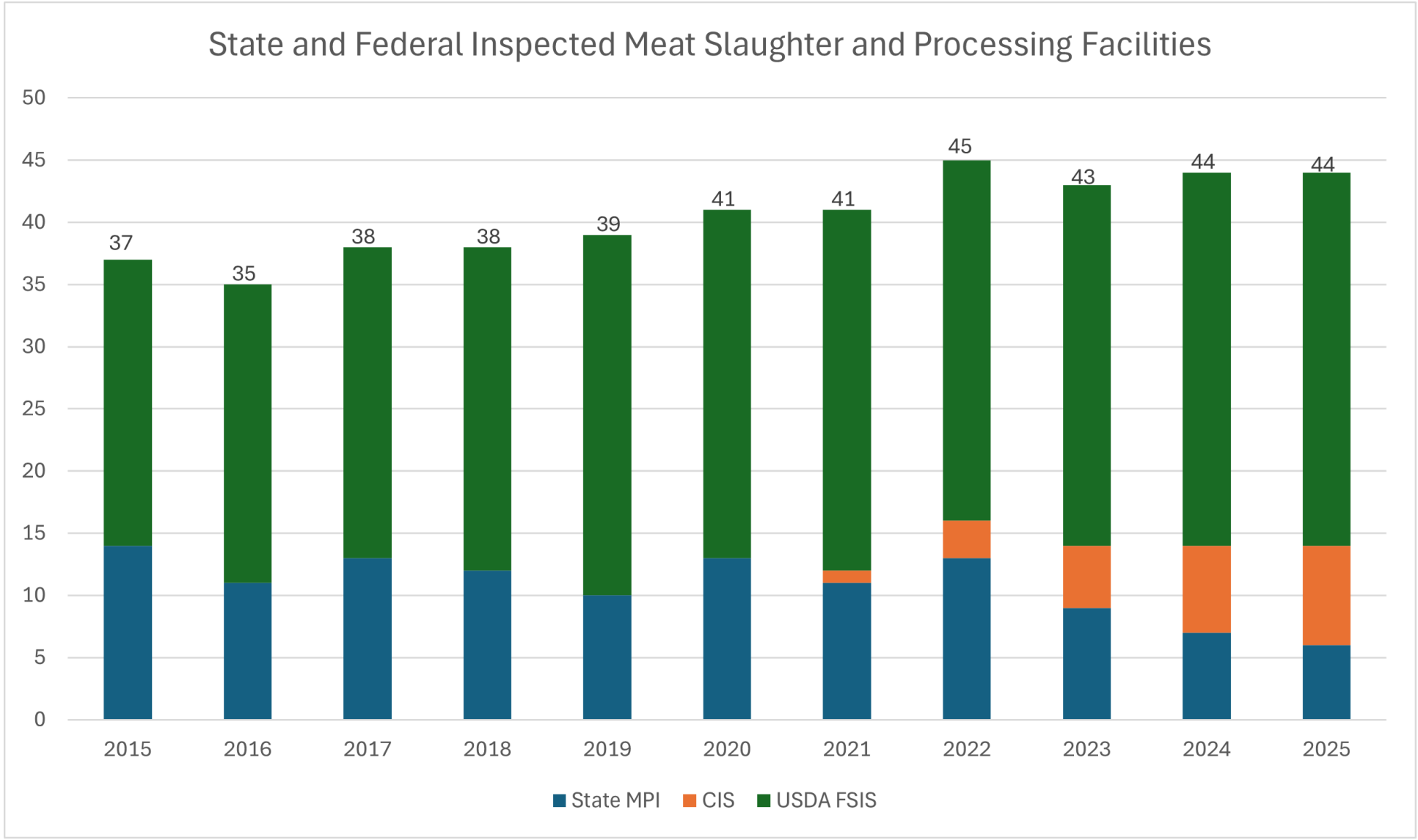
## **PROCESSING FOCUS:** DAIRY




Dairy Product Manufacturing a **$1.78 Billion** Industry

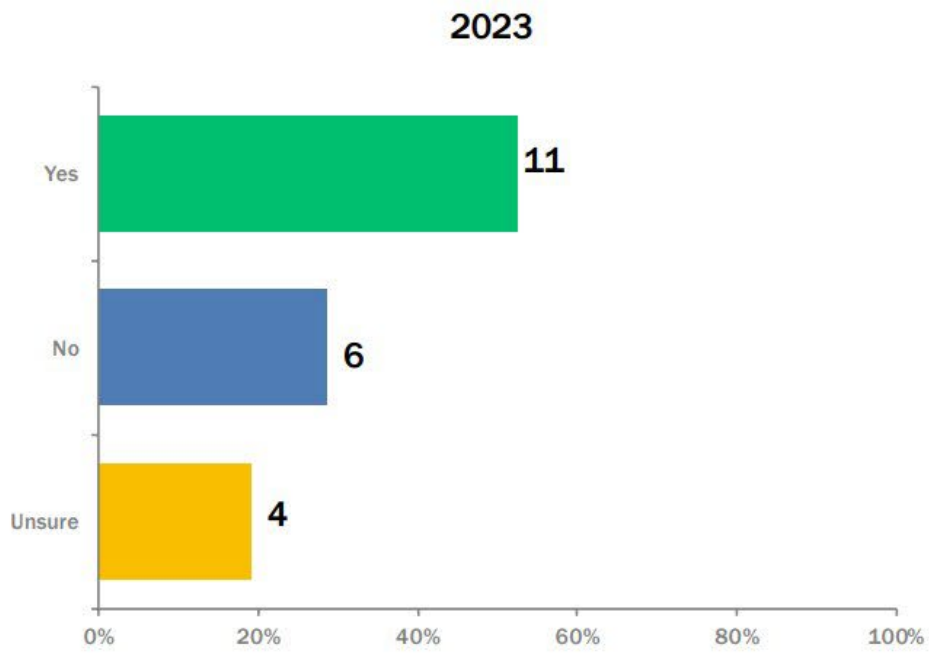
Cheese Manufacturing alone is a **$1.19 Billion** Industry

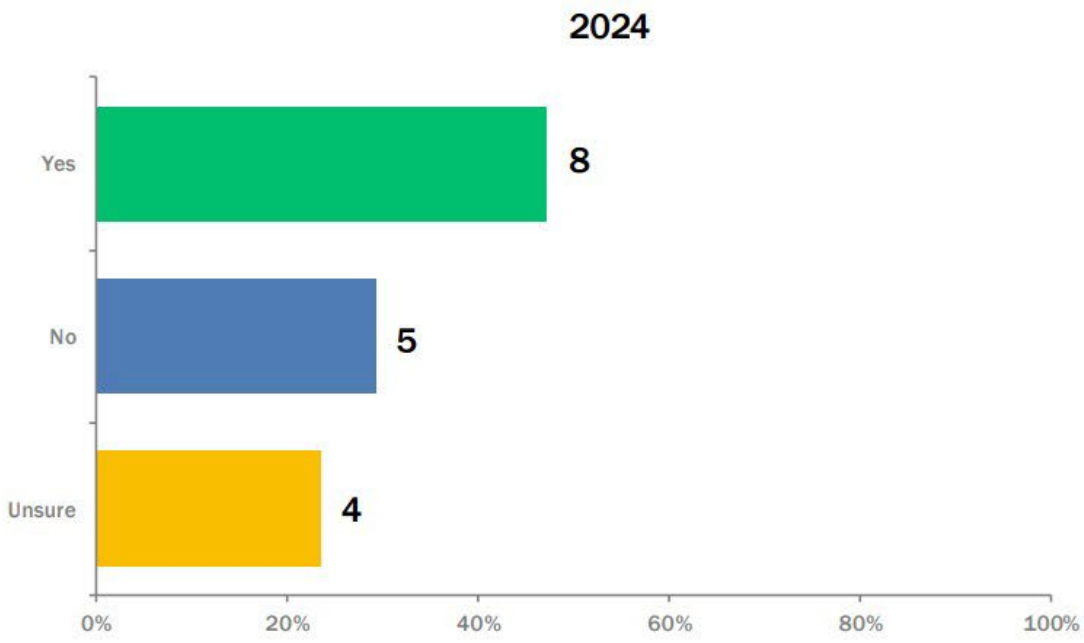
# **PROCESSING FOCUS:** MEAT



## **PROCESSING FOCUS:** MEAT

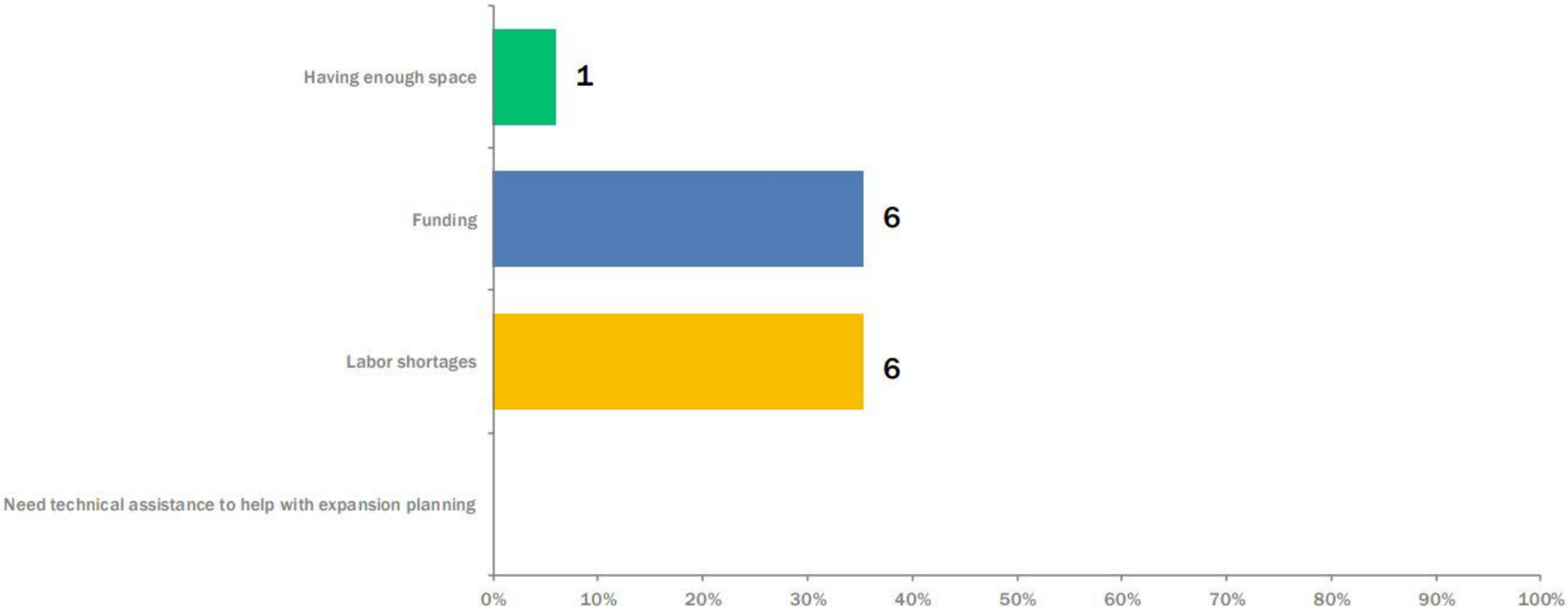
# Are you interested in expanding your facility's capacity?



**PROCESSING FOCUS:** MEAT

# What is your largest barrier to facility expansion?




**Estimate of 3-year infrastructure investment needs across 5 industries:**

**Livestock Infrastructure Estimate:**
$58,800,000

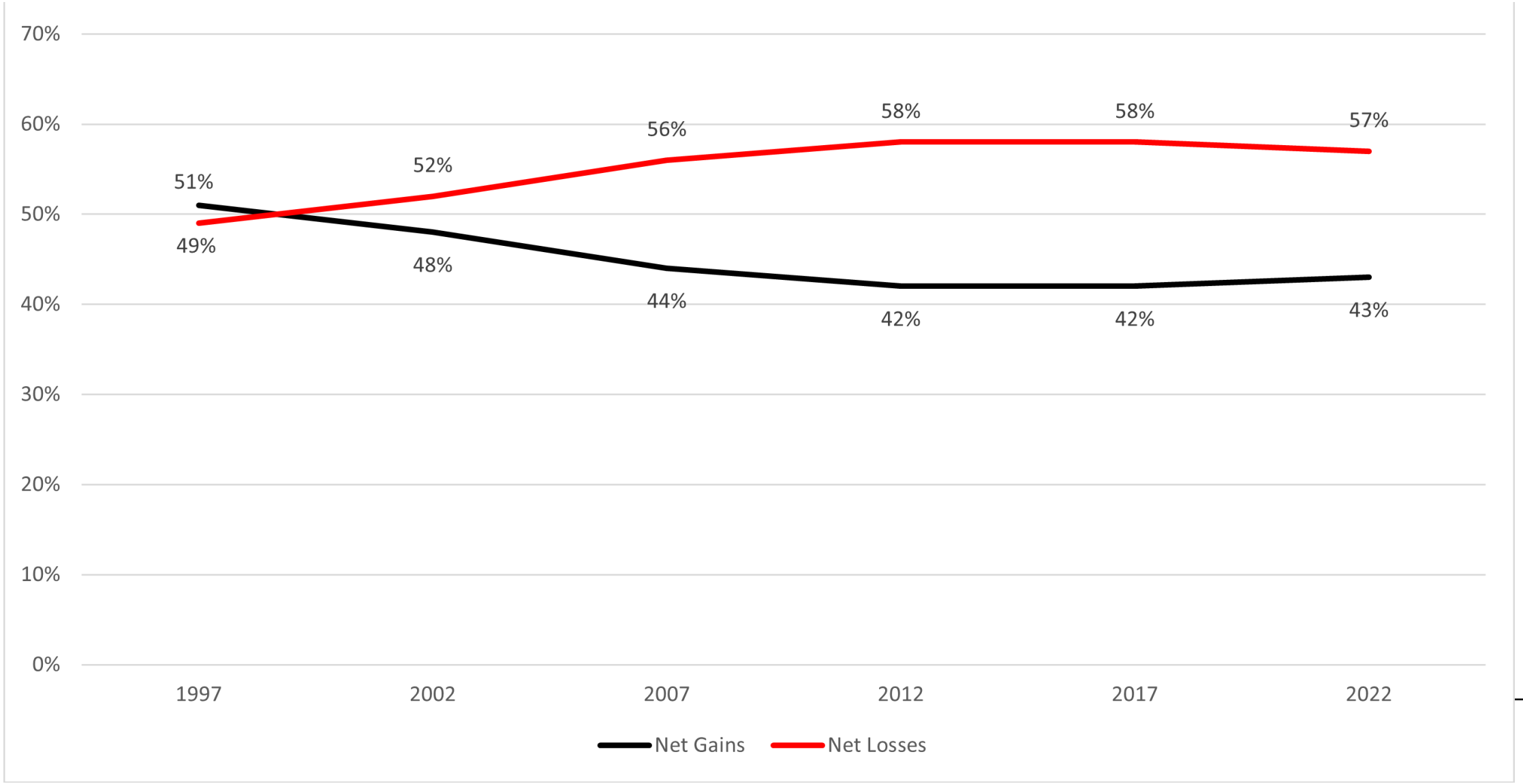
**Dairy Infrastructure Estimate:**
$53,150,000

**Produce Infrastructure Estimate:**
$46,850,000

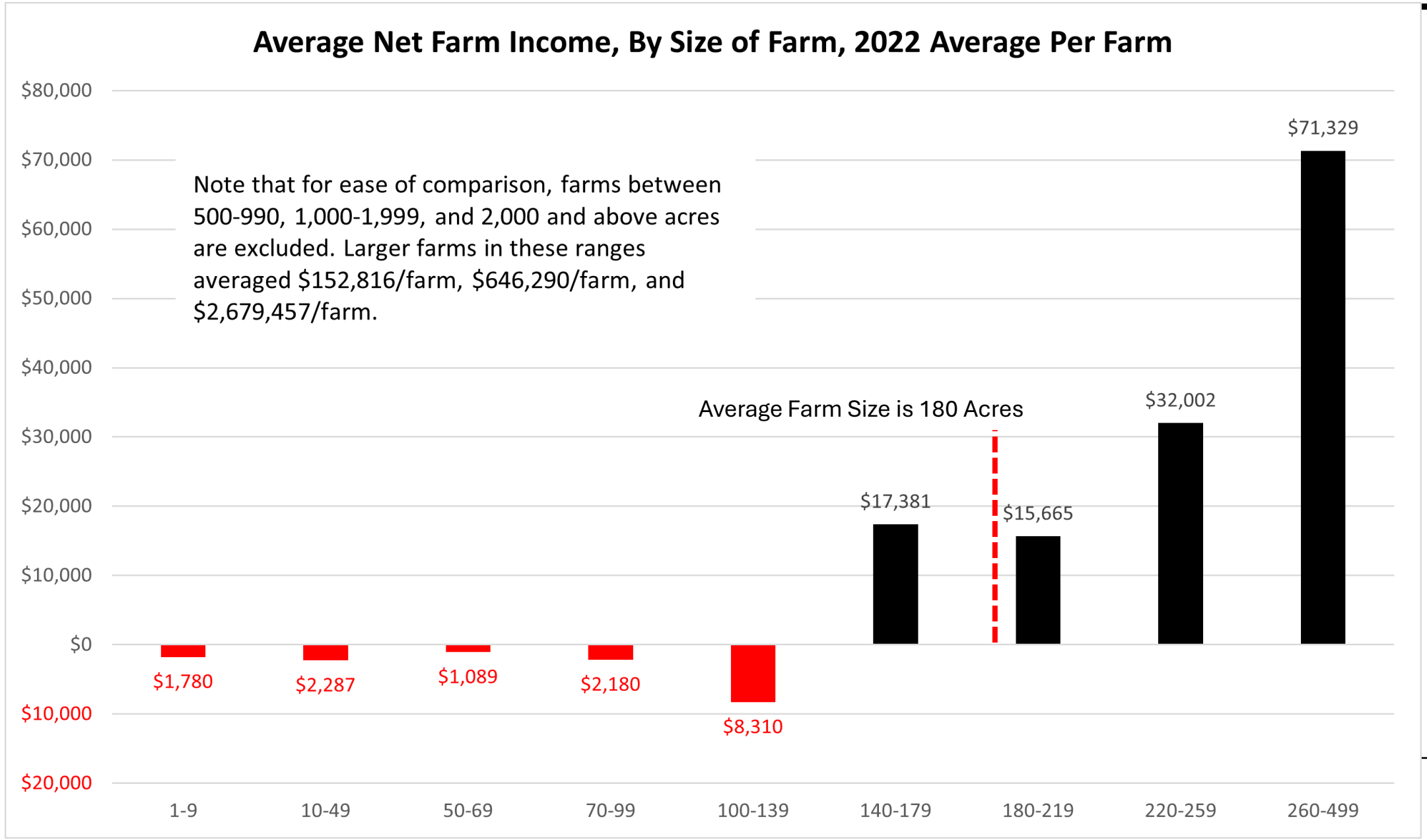
**Grains Infrastructure Estimate:**
$15,050,000

**Permanent Crops Infrastructure Estimate:**
$5,000,000

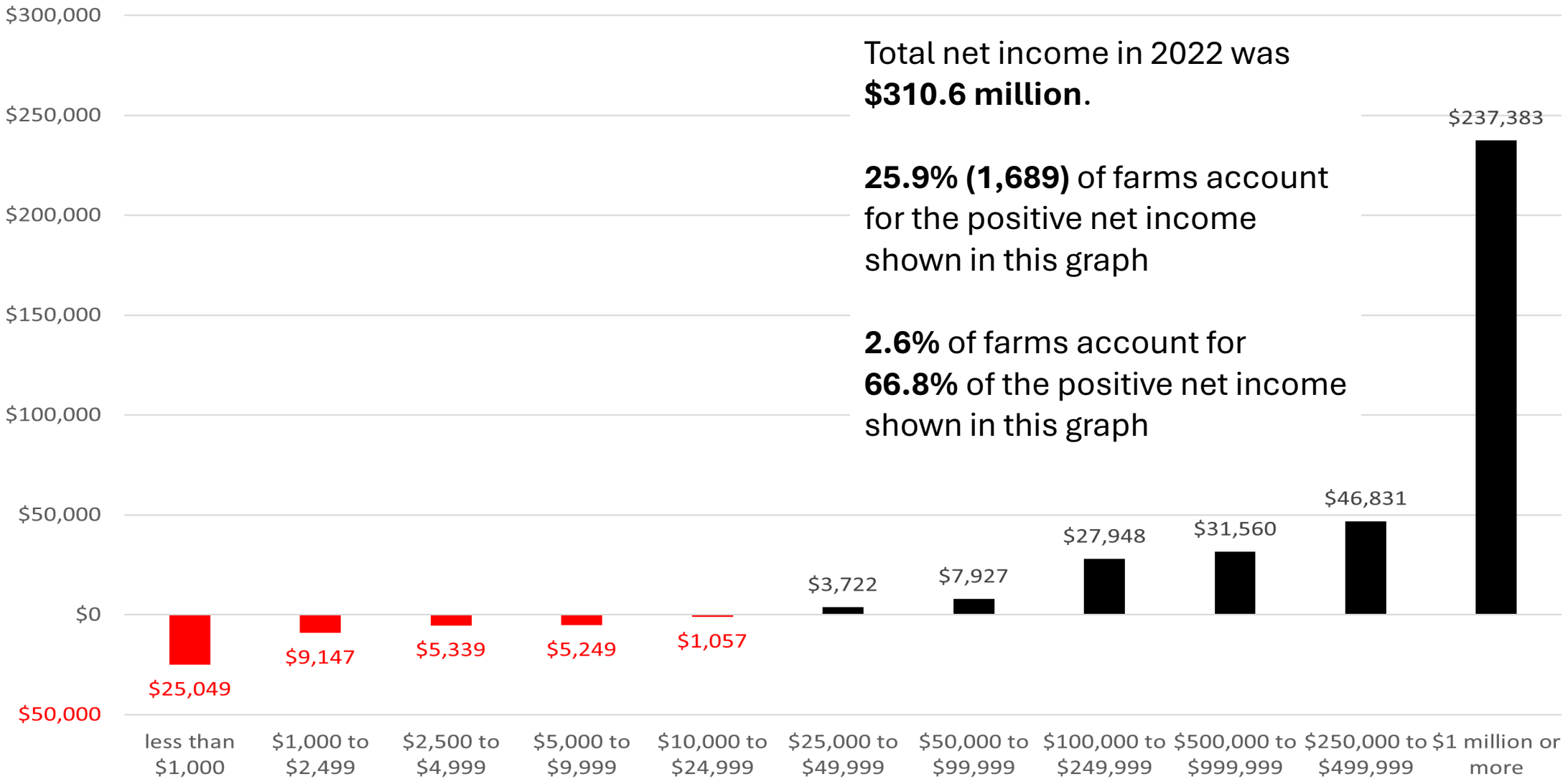
# **FARM VIABILITY:** PERCENTAGE OF FARMS REPORTING NET GAINS AND NET LOSSES



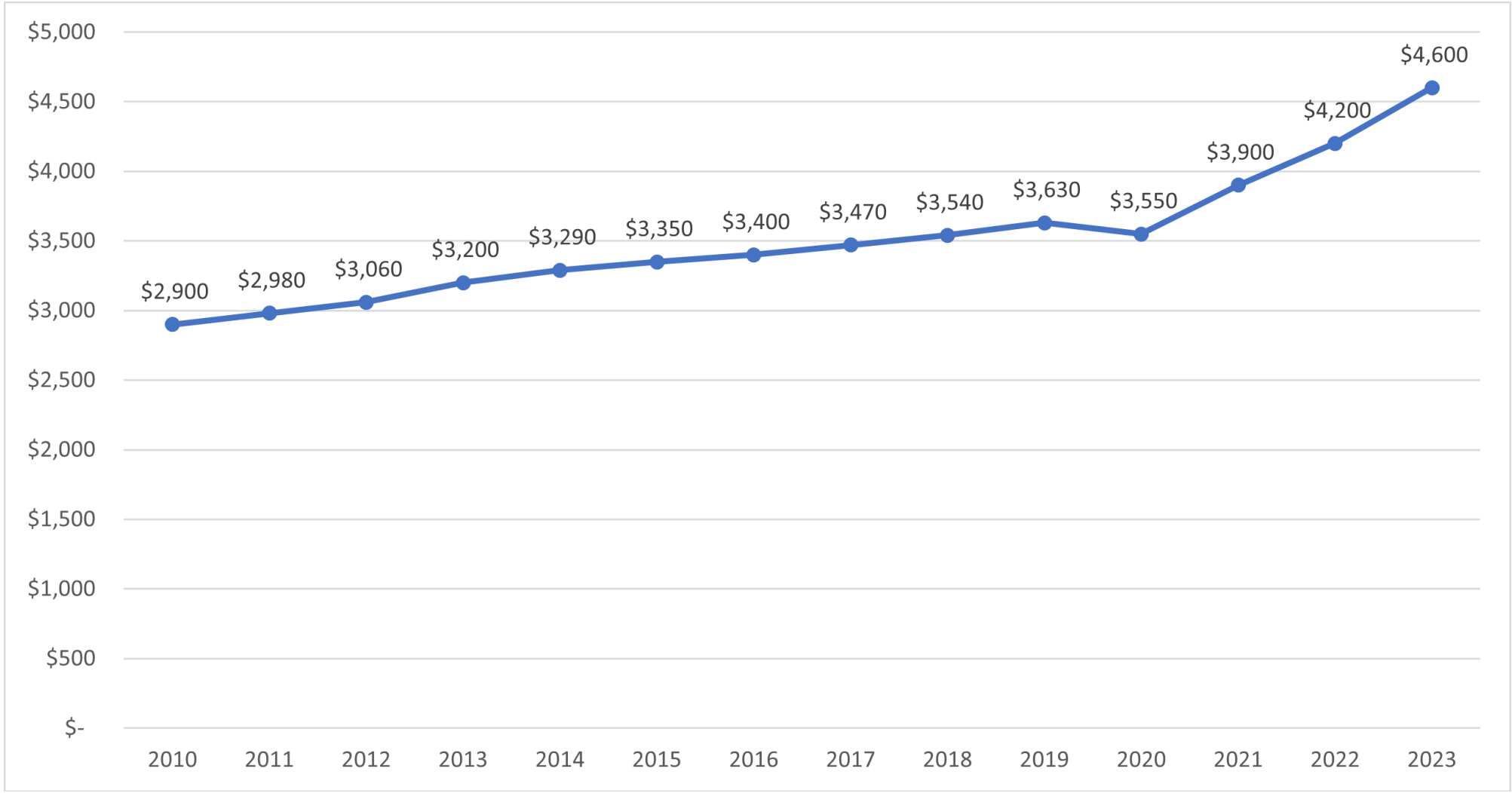
# **FARM VIABILITY:** NET INCOME BY FARM SIZE



# **FARM VIABILITY:** NET INCOME BY VALUE OF SALES (ECONOMIC CLASS), 2022 (IN $1,000)

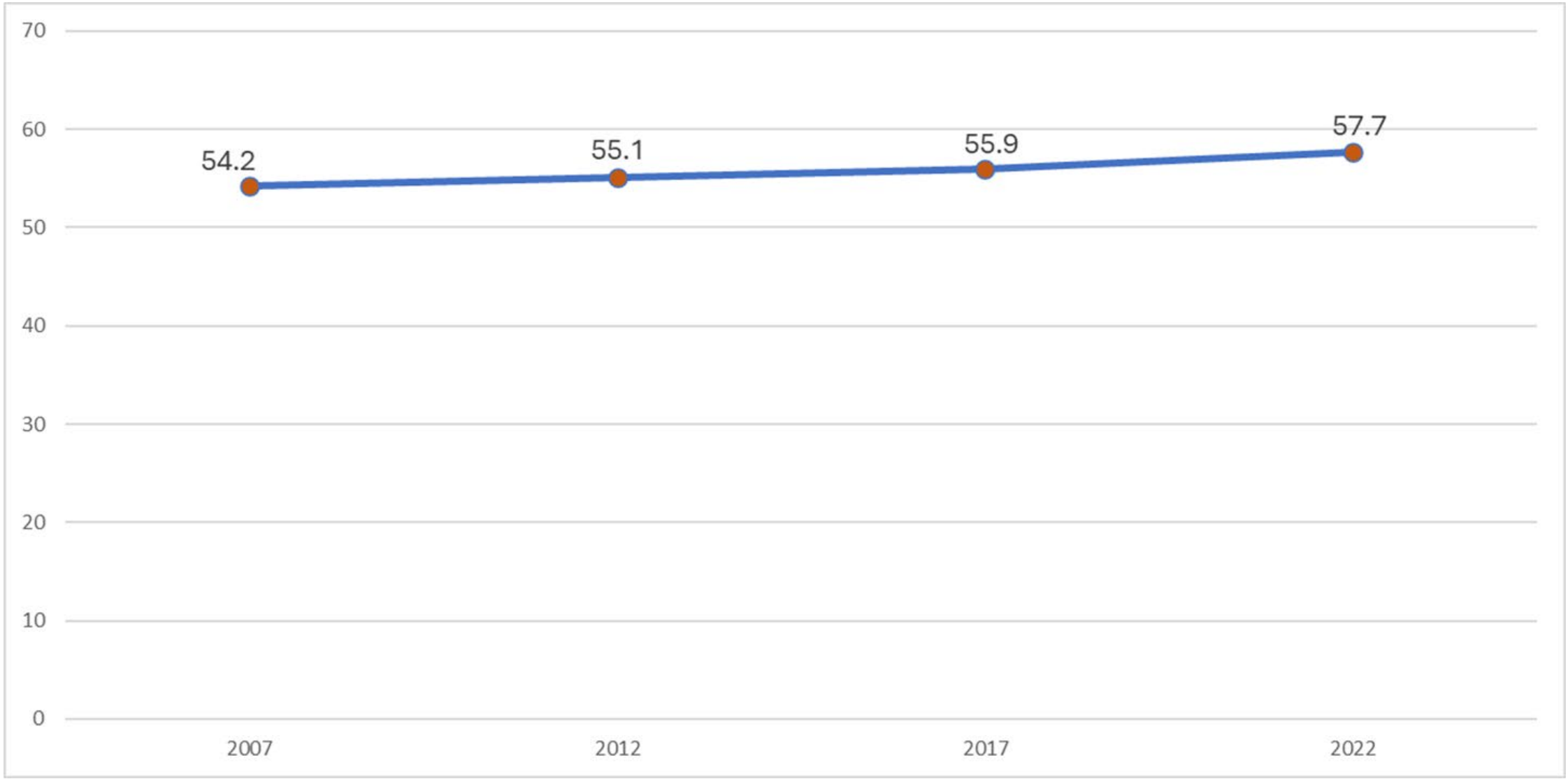


## **FARM VIABILITY:** VALUE OF FARMLAND PER ACRE, 2010-2023



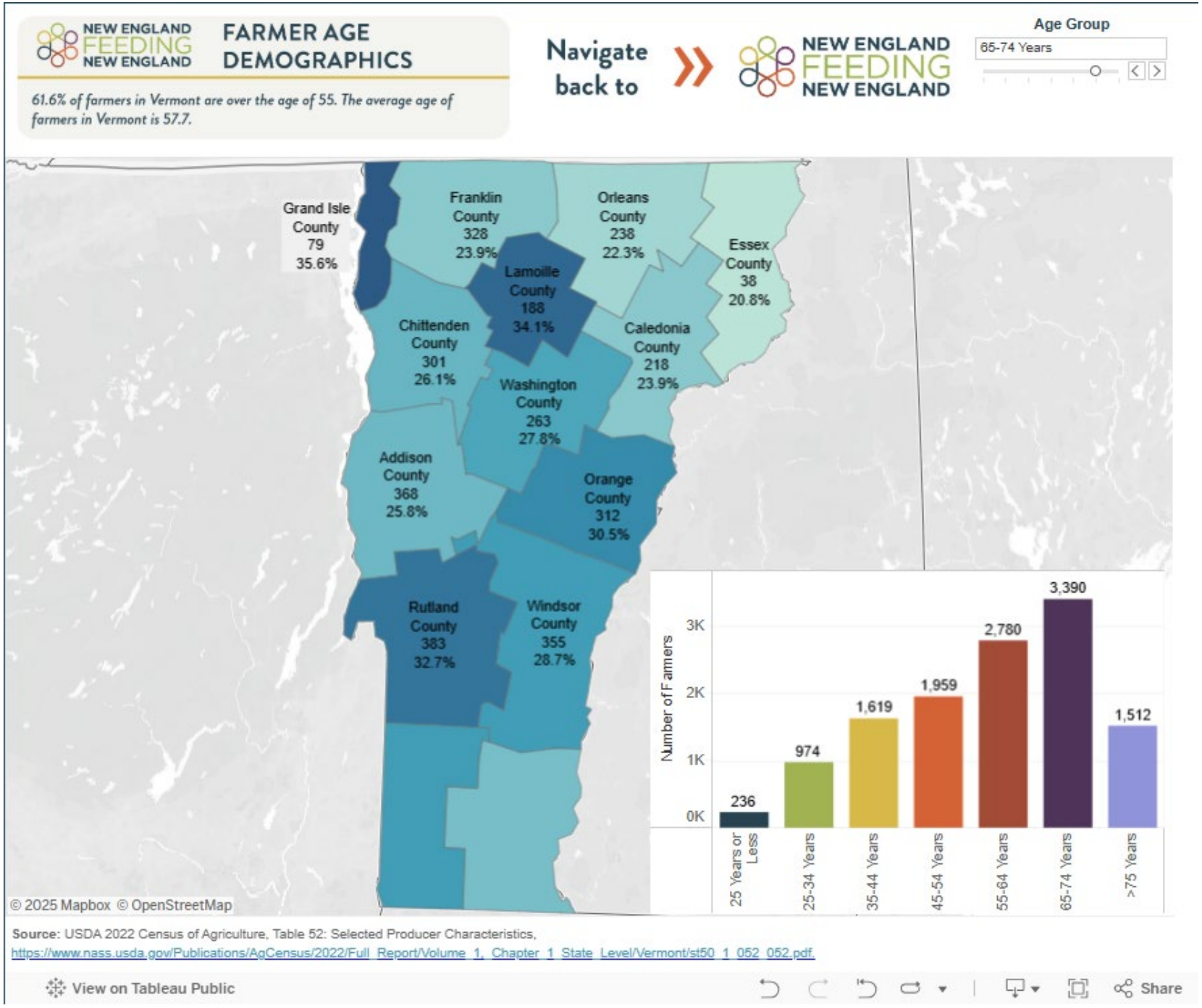

**58.6% increase** since 2010

## **FARM VIABILITY:** DEMOGRAPHICS

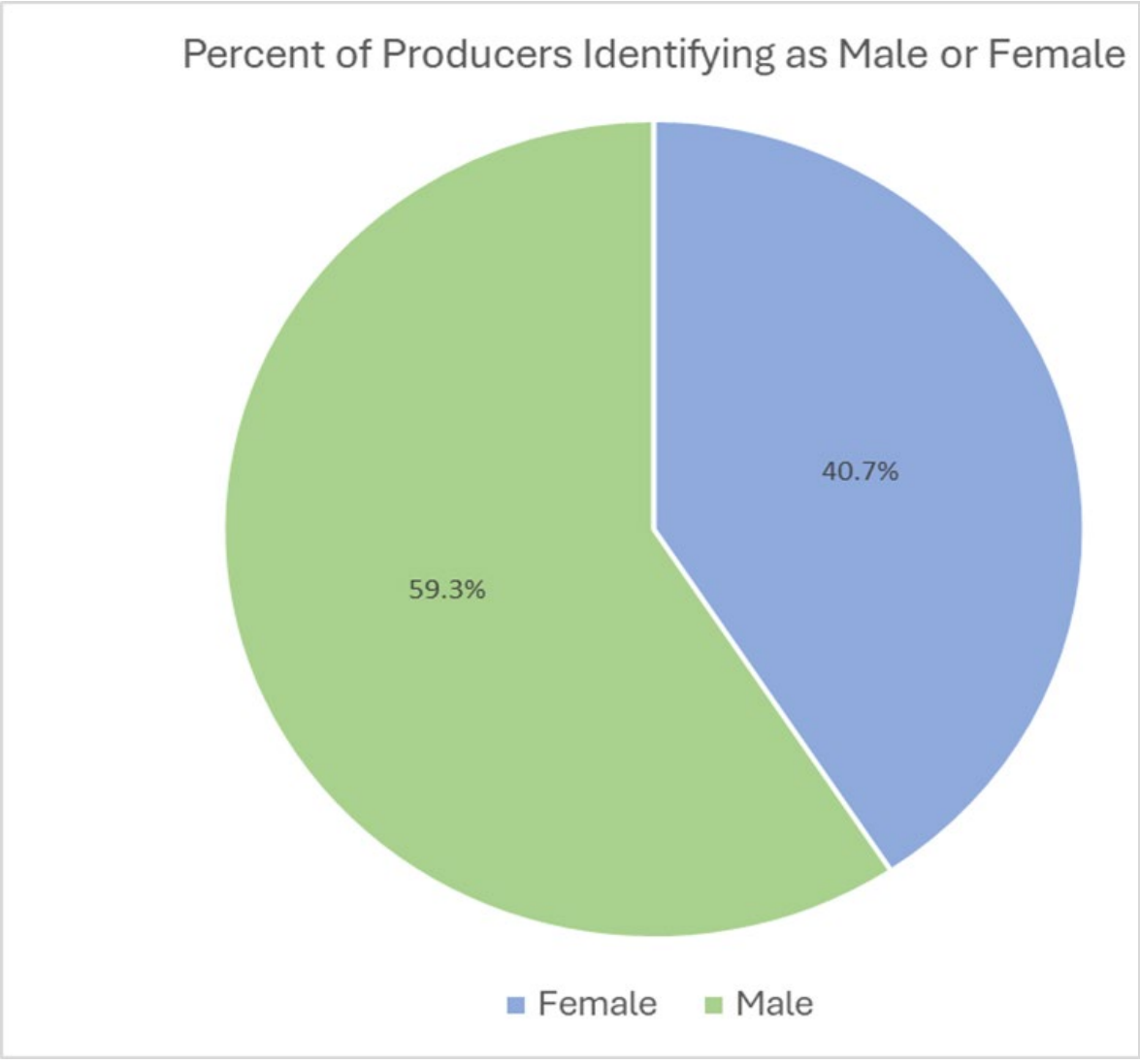


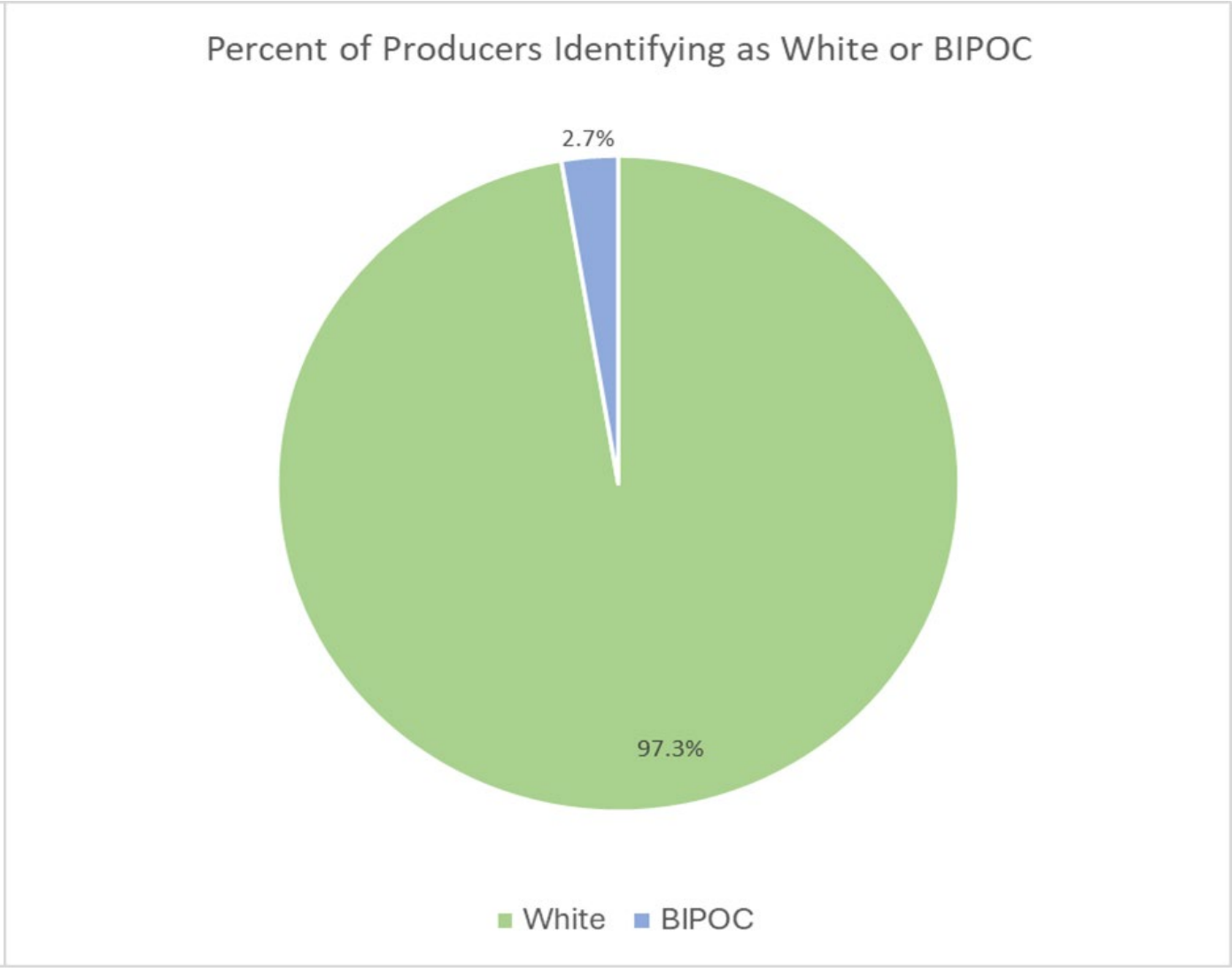
**FARM VIABILITY:**
DEMOGRAPHICS

***63.6%** of farmers in VT are over the age of 55.*



# **FARM VIABILITY:** DEMOGRAPHICS



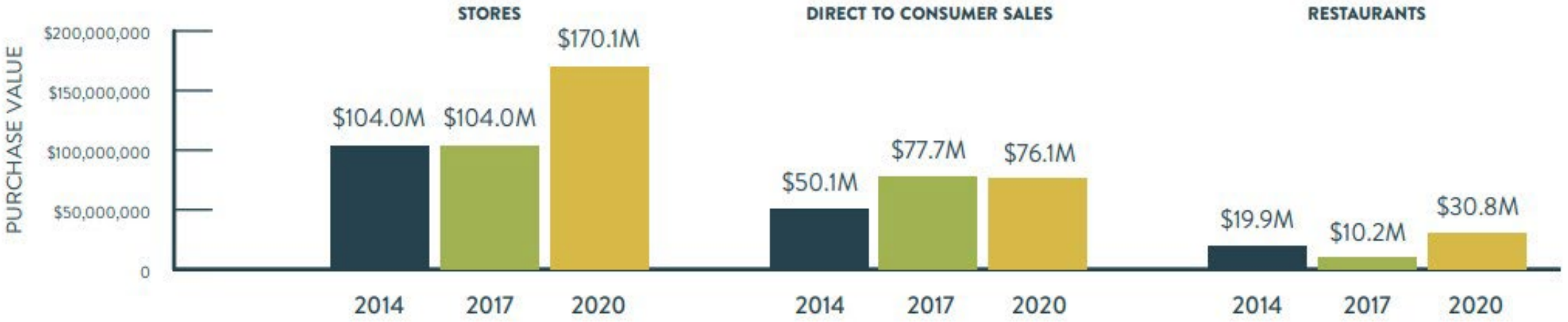



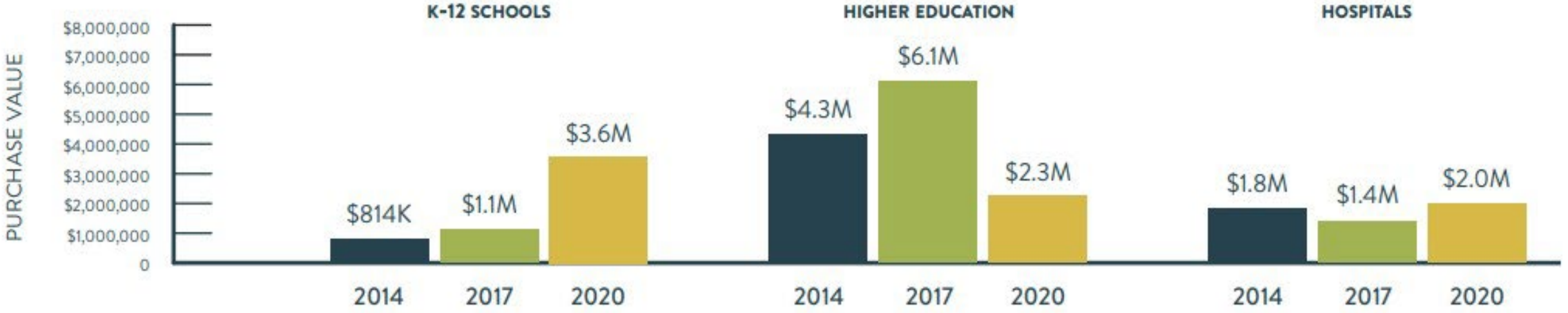

BEAR ROOTS FARM
ONIONS
CERTIFIED ORGANIC BY VOF
ORGANIC PRODUCE
Shallots


CABOT
CREAMERY

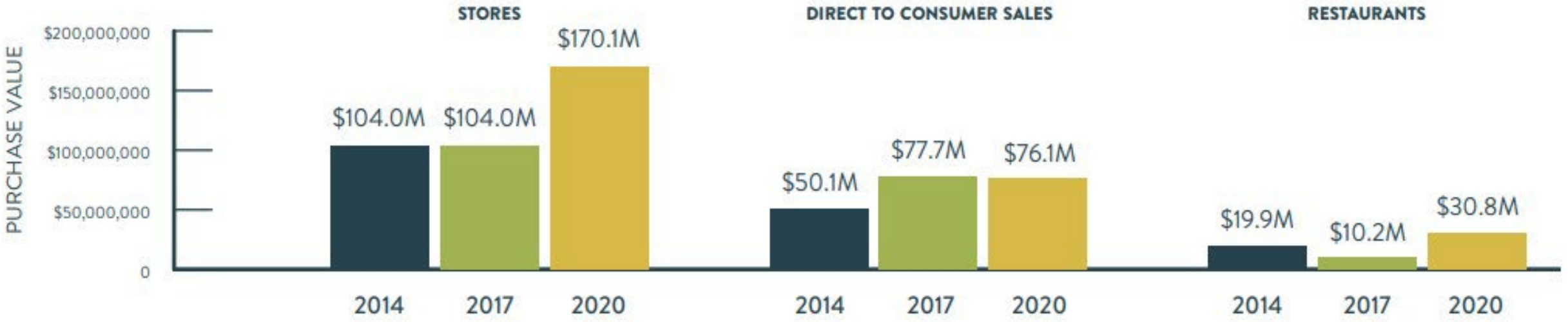

Local food purchases are **10.1%** of total food purchases in Vermont

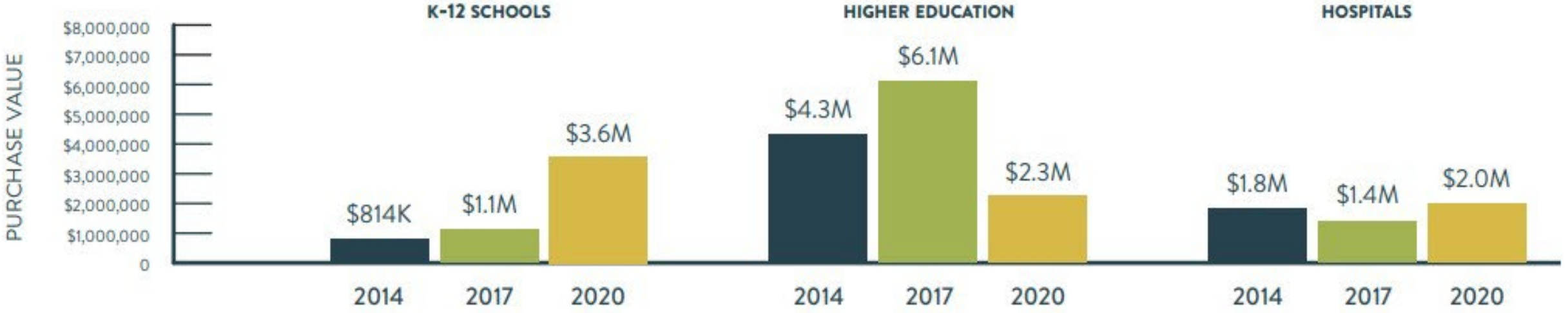
# LOCAL FOOD SALES BY MARKET CHANNEL



# LOCAL FOOD SALES BY MARKET CHANNEL



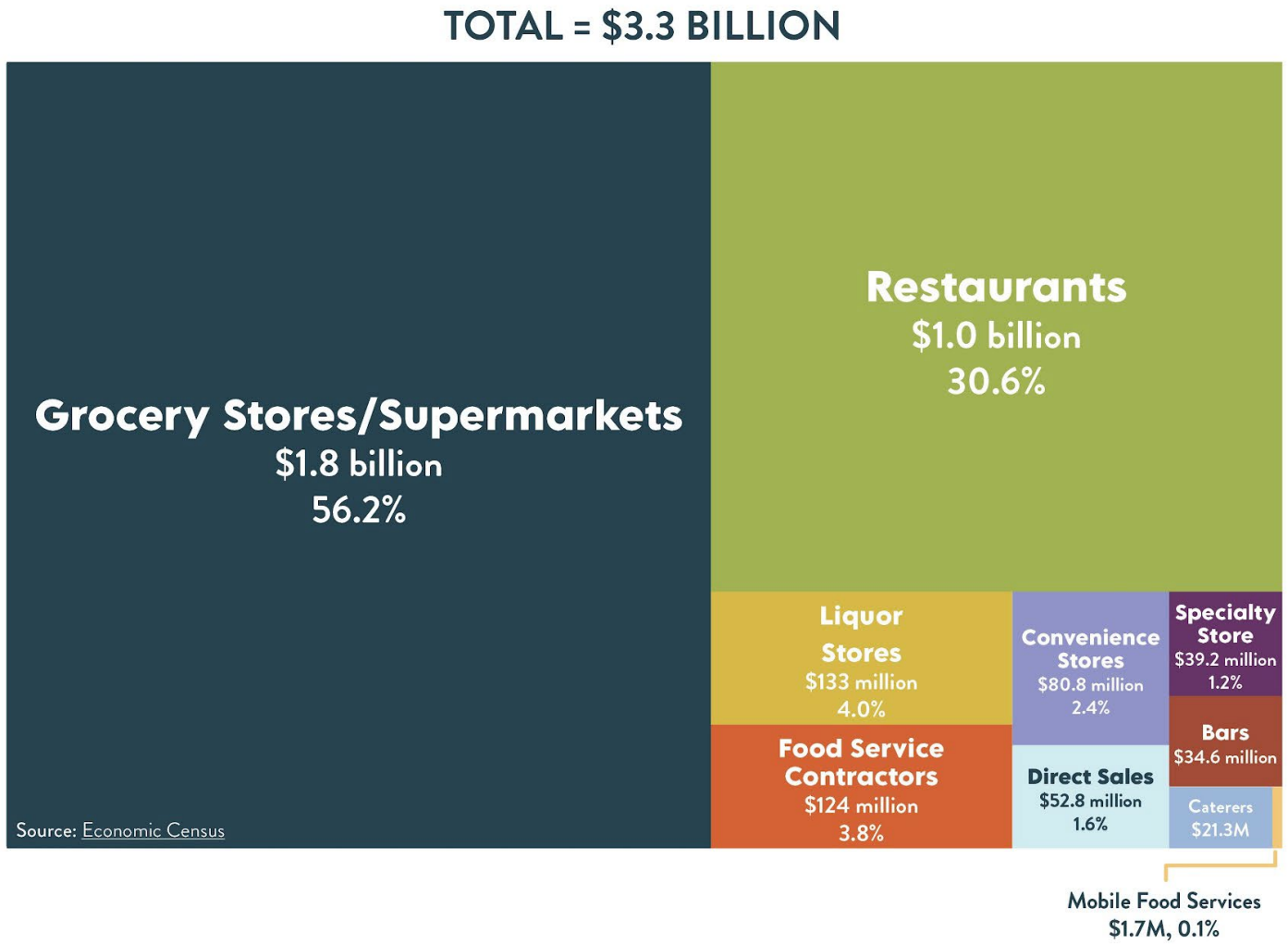
## MARKET CHANNEL FOCUS – RETAIL GROCERY

**$1.8 Billion** spent at grocery stores or supercenters/warehouse clubs in Vermont

**$36.7 Billion** spent at grocery stores or supercenters/warehouse clubs in New England

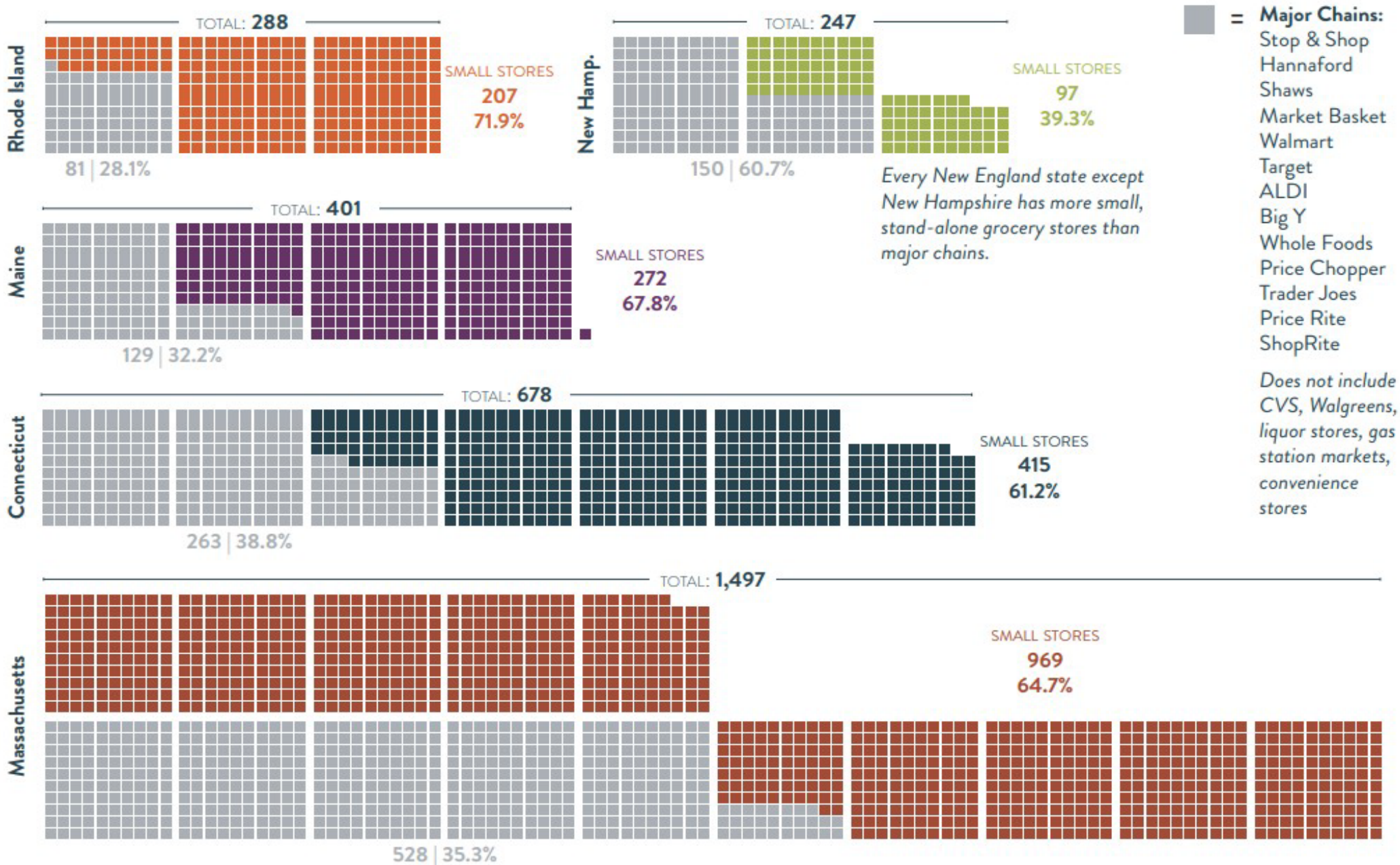
# MARKET CHANNEL FOCUS – RETAIL GROCERY

- Food Stores and Services Sales, 2017

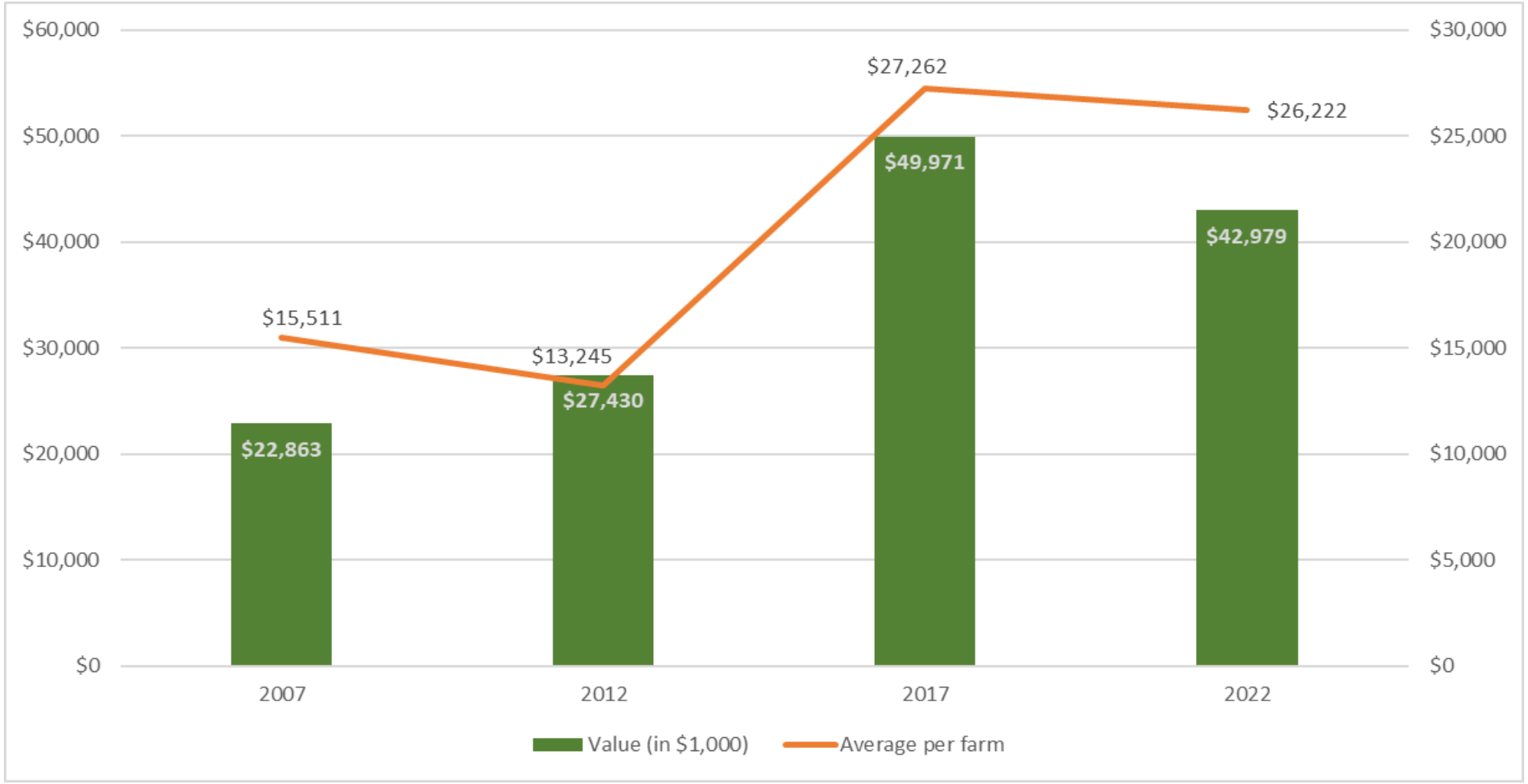


# MARKET CHANNEL FOCUS – RETAIL GROCERY

# Figure 8: Number of Major Grocery Store Chains and Small Stores by State

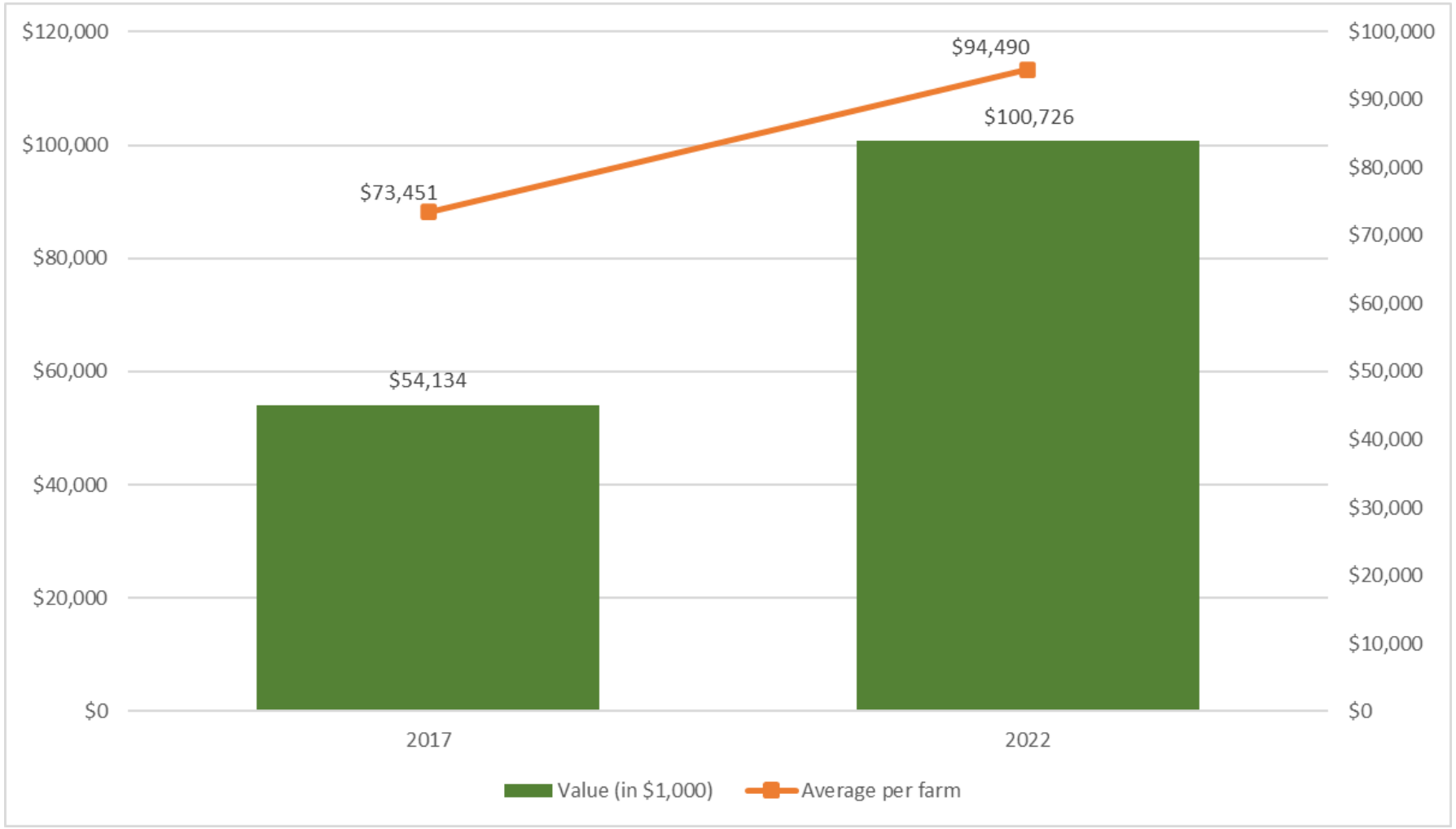


# MARKET CHANNEL FOCUS: DIRECT SALES



## MARKET CHANNEL FOCUS: DIRECT SALES

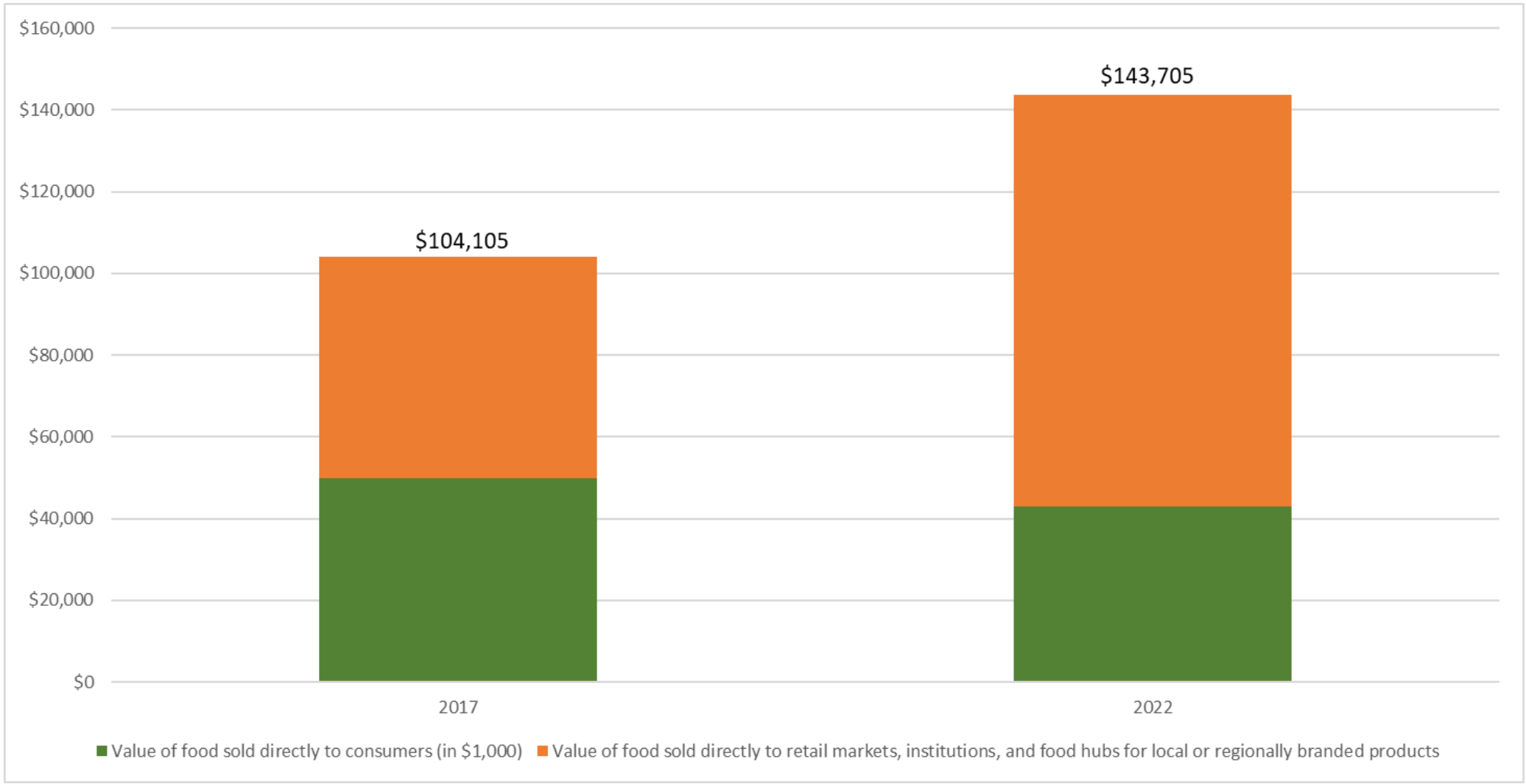
VALUE OF FOOD SOLD DIRECTLY TO RETAIL MARKETS, INSTITUTIONS, AND FOOD HUBS, 2017-2022 (IN $1,000)




An **increase** of **86%= $46.6 million**

## MARKET CHANNEL FOCUS: DIRECT SALES

VALUE OF DIRECT SALES COMBINED, 2017-2022 (IN $1,000)



## ENVIRONMENTAL SUSTAINABILITY GOALS

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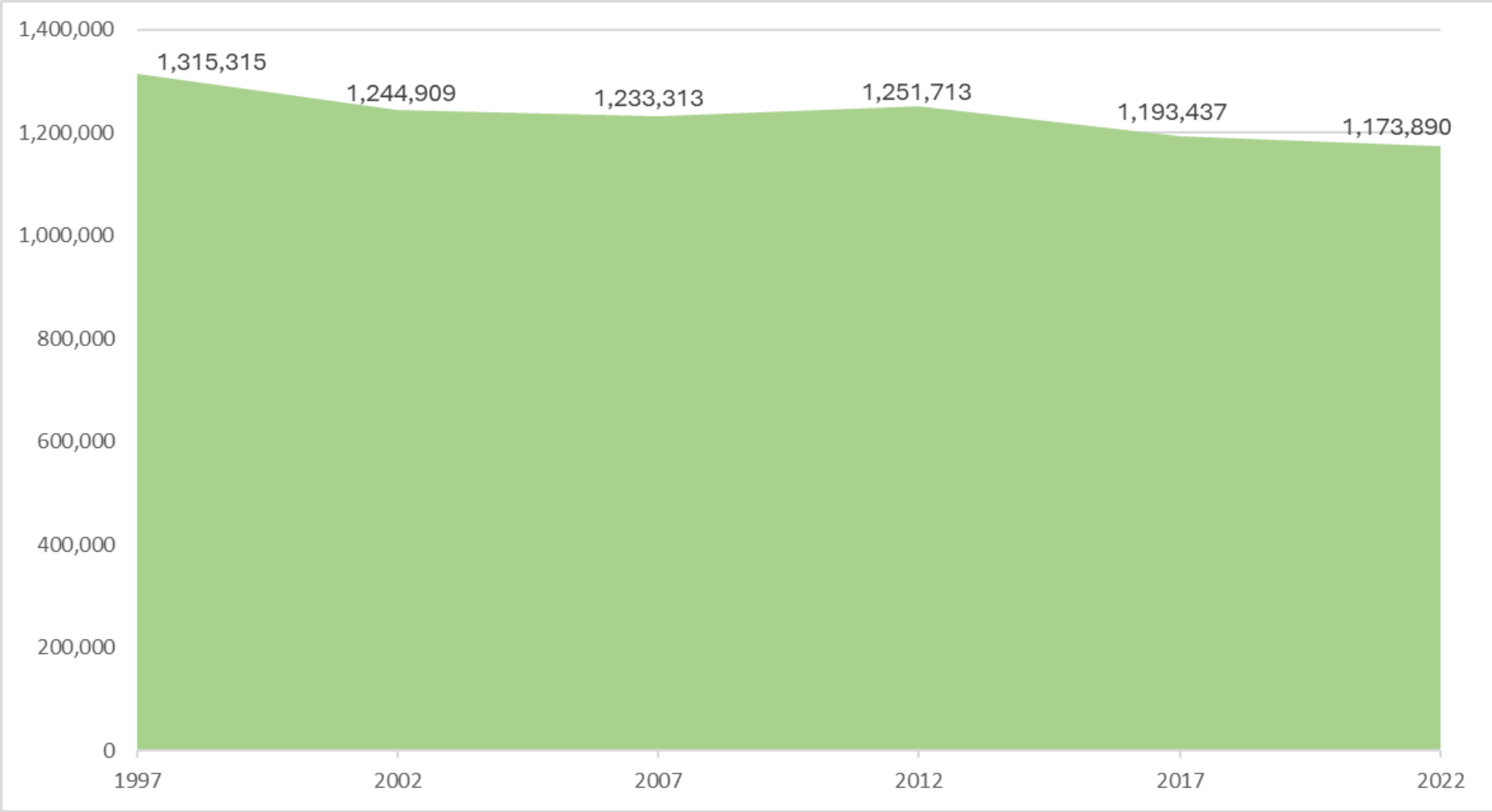
9. Edible food, food scraps, and other food residuals are used for their highest purpose, and not considered waste.

## ENVIRONMENT: FARMLAND
TOTAL ACRES OF FARMLAND, 1997-2022




- **10.8% decrease** since 1997
- **6.2% decrease** since 2012
- **1.6% decrease** since 2017

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

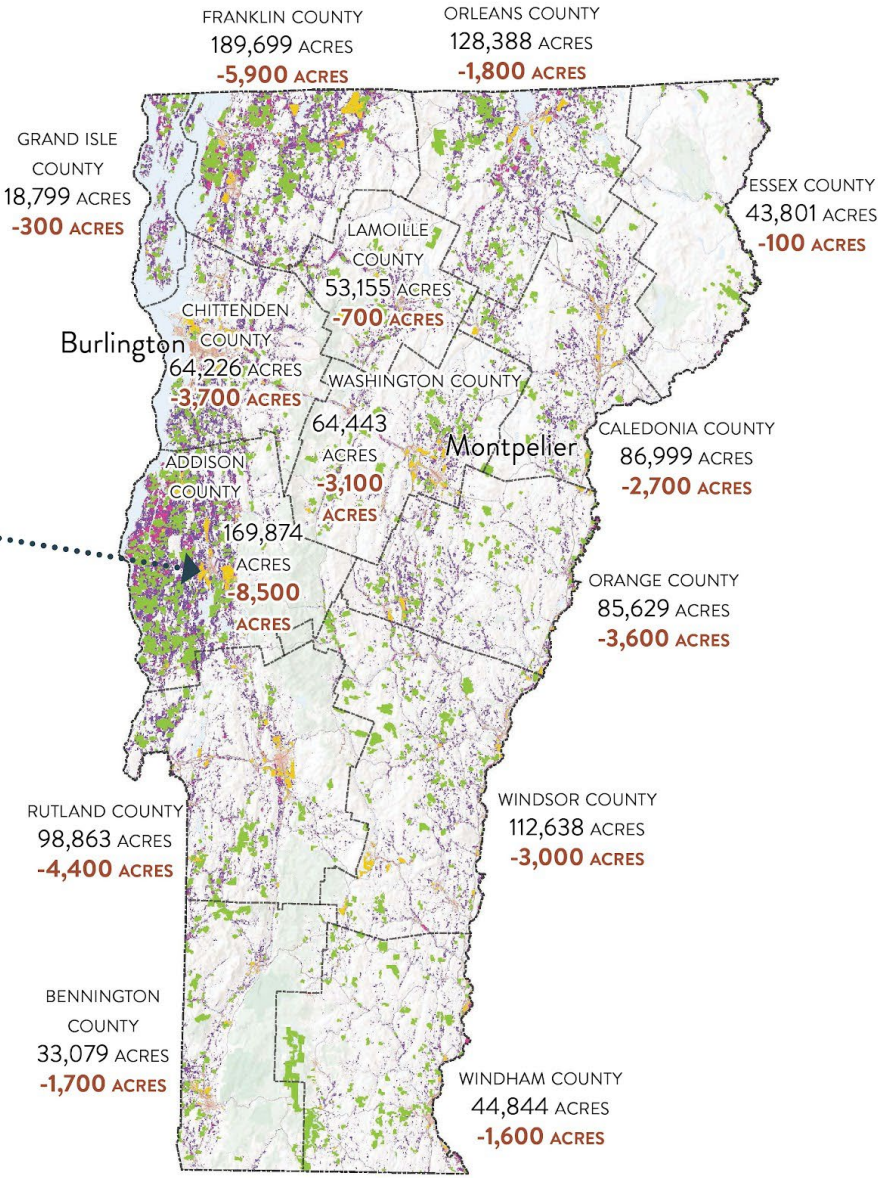
### TOTAL

**1,193,437 ACRES** EXISTING ACREAGE

**-41,200 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 Vermont could lose an additional **41,200 acres** by 2040 under a "Business as Usual" development scenario and **61,800 acres** under a "Runaway Sprawl" scenario.

AFT projects that **Addison, Franklin,** and **Rutland** counties will experience the biggest decreases in land in agriculture.

Source: American Farmland Trust, Farms Under Threat 2040: Choosing an Abundant Future

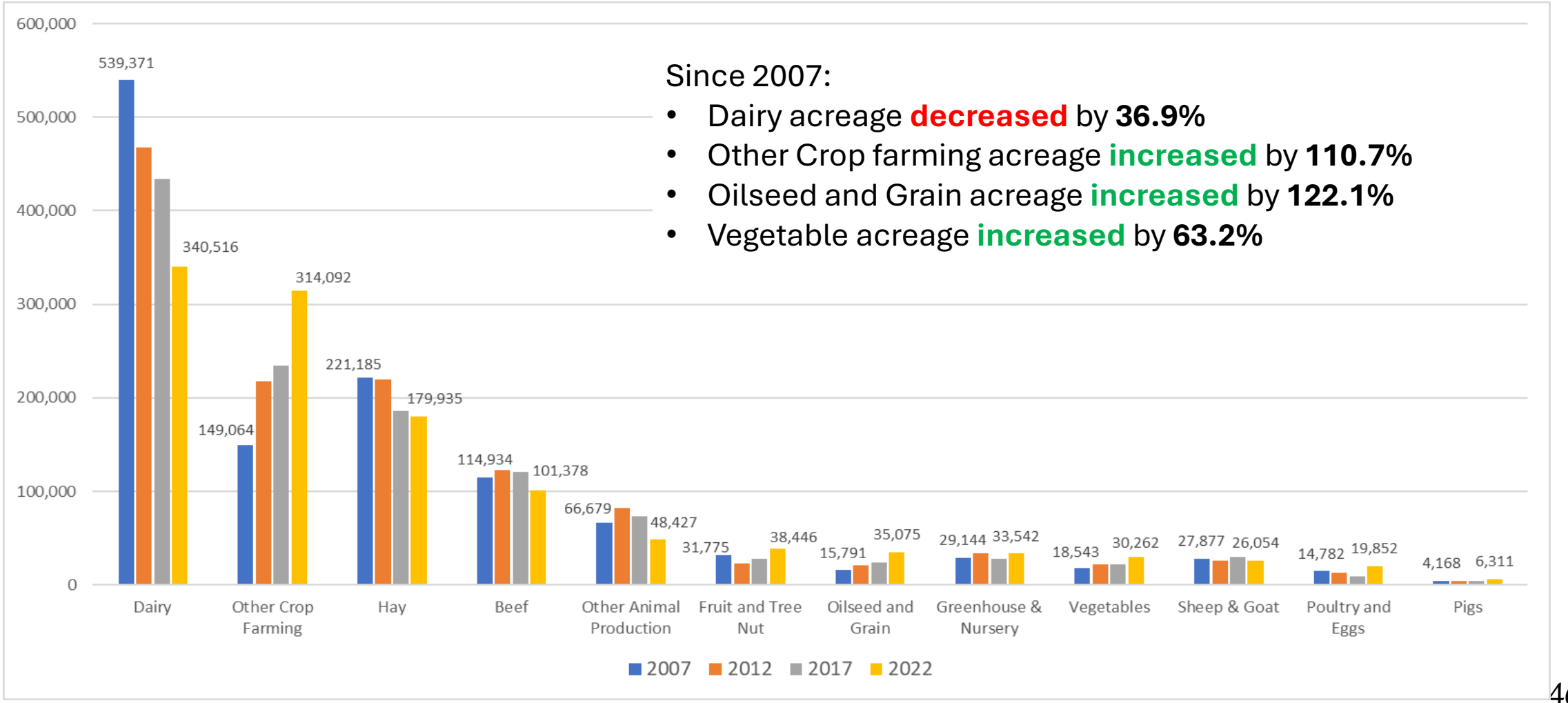
**20.5%** Vermont has the highest percentage of agricultural land as a percentage of total land area, 20.5%, of any state in New England, but only a small percentage of agricultural land is used for crops to directly feed people.

## BUSINESS AS USUAL PROJECTED CHANGES IN LAND IN AGRICULTURE

BY 2040 VERMONT COULD LOSE BETWEEN **41,200 - 61,800 ACRES OF FARMLAND**, MAINLY IN ADDISON, FRANKLIN AND RUTLAND COUNTIES.

## ENVIRONMENT: FARMLAND

TOTAL ACRES OF FARMLAND, BY COMMODITY OR COMMODITY GROUP 2007-2022

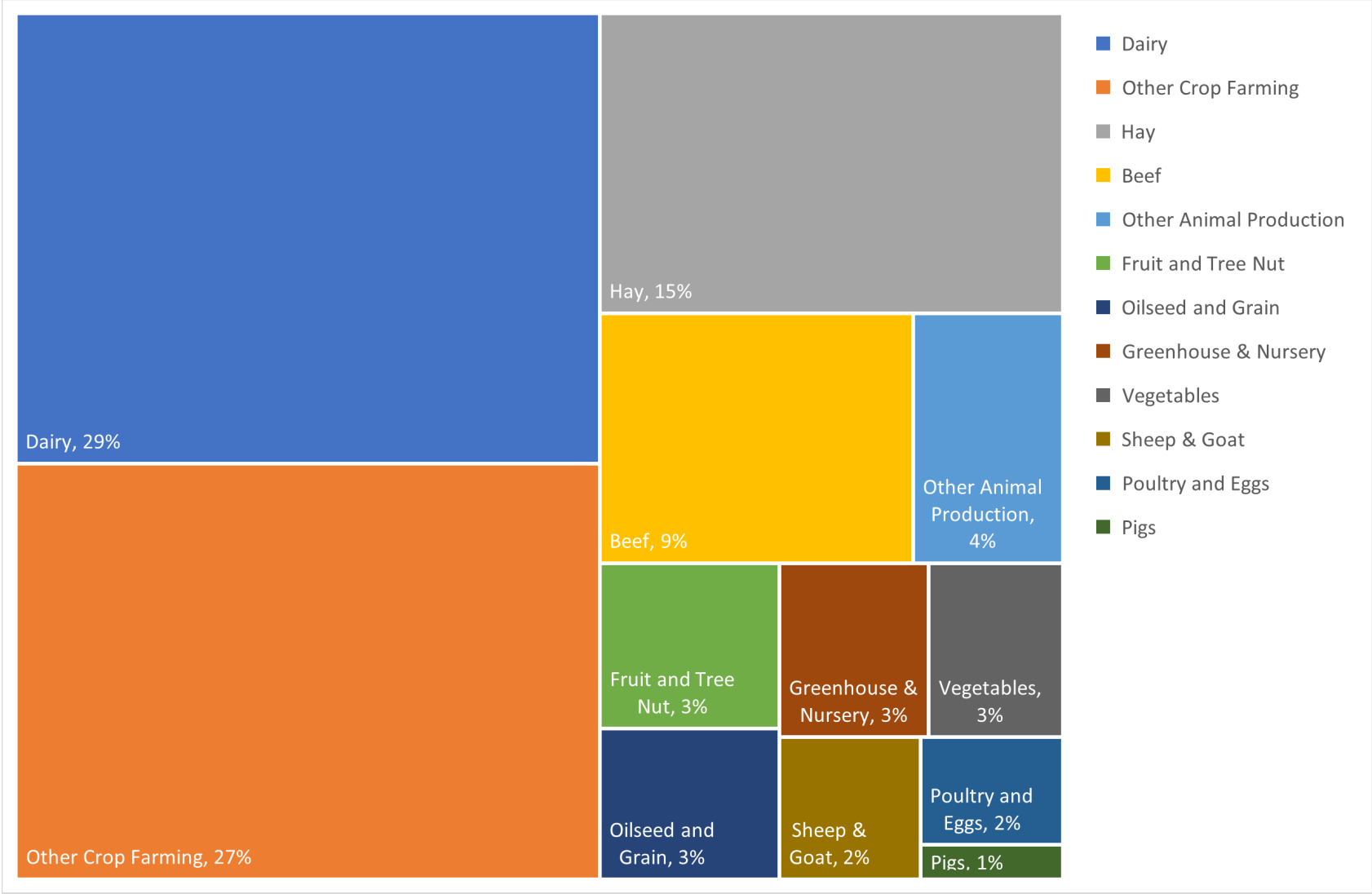



Since 2007:

- Dairy acreage **decreased** by **36.9%**
- Other Crop farming acreage **increased** by **110.7%**
- Oilseed and Grain acreage **increased** by **122.1%**
- Vegetable acreage **increased** by **63.2%**

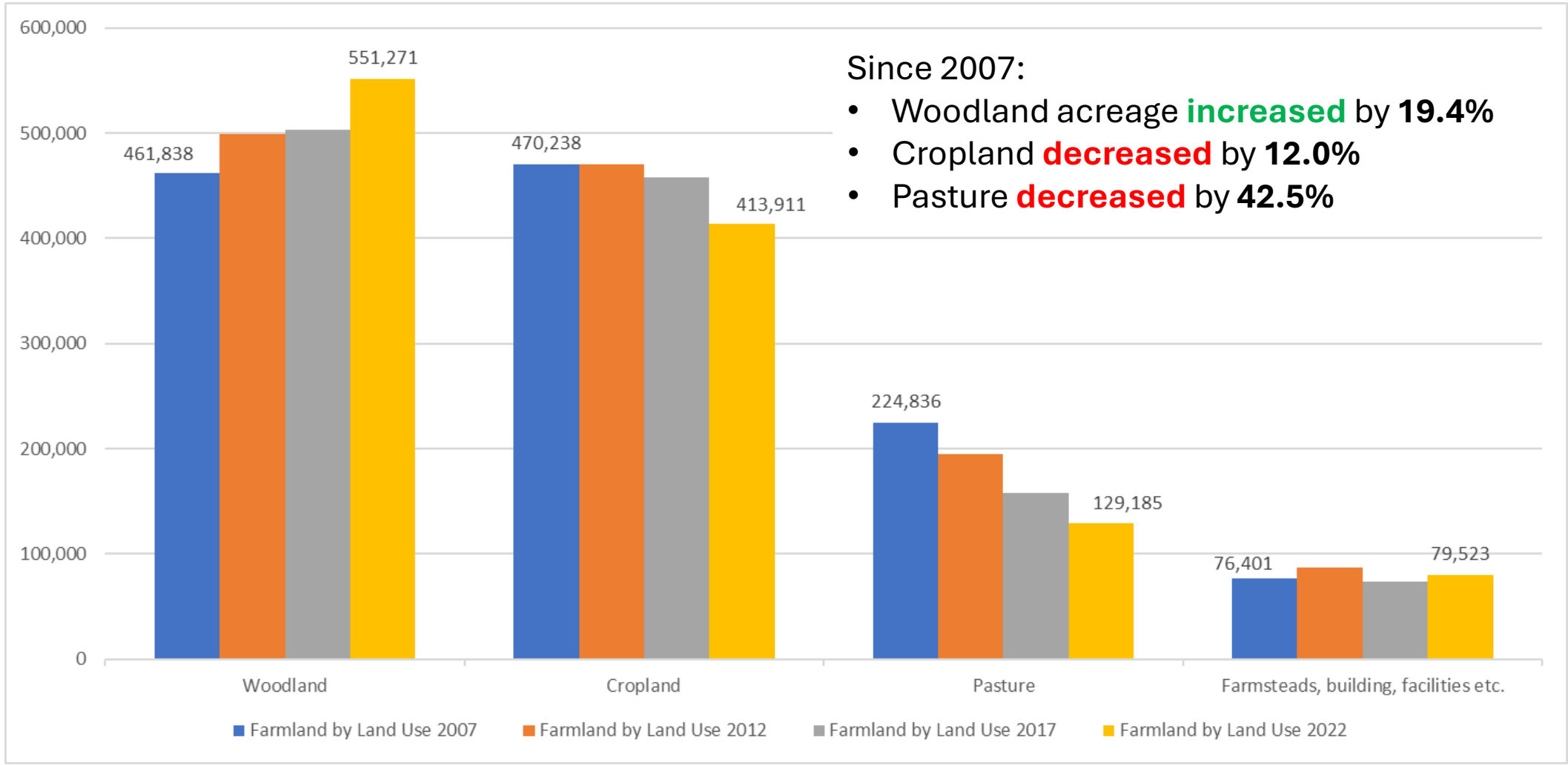
# ENVIRONMENT: FARMLAND

## FARMLAND BY COMMODITY TYPE, PERCENTAGE BREAKDOWN 2022



## ENVIRONMENT: FARMLAND

TOTAL ACRES OF FARMLAND, BY LAND USE TYPE 2007-2022

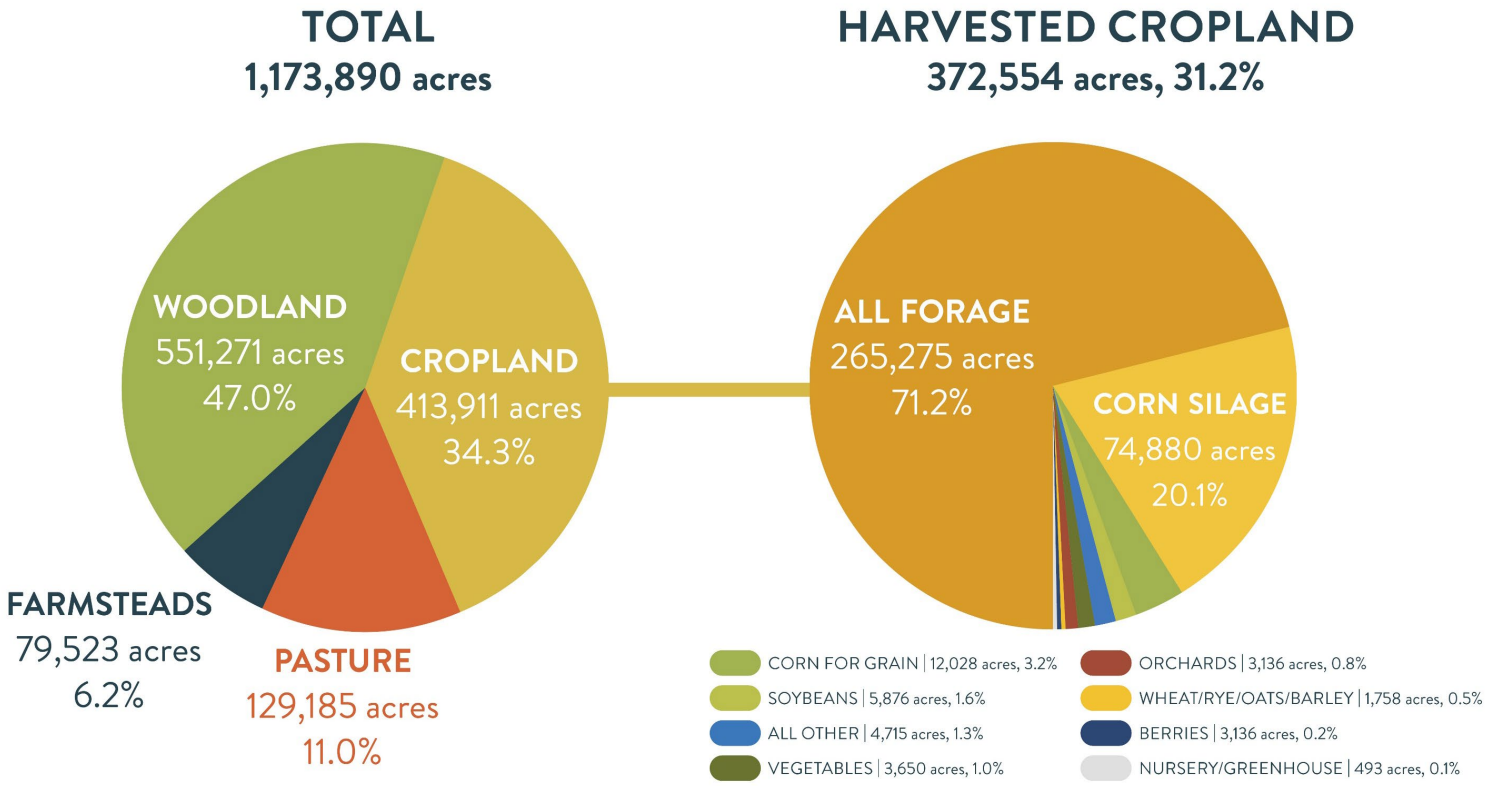



Since 2007:

- Woodland acreage **increased** by **19.4%**
- Cropland **decreased** by **12.0%**
- Pasture **decreased** by **42.5%**

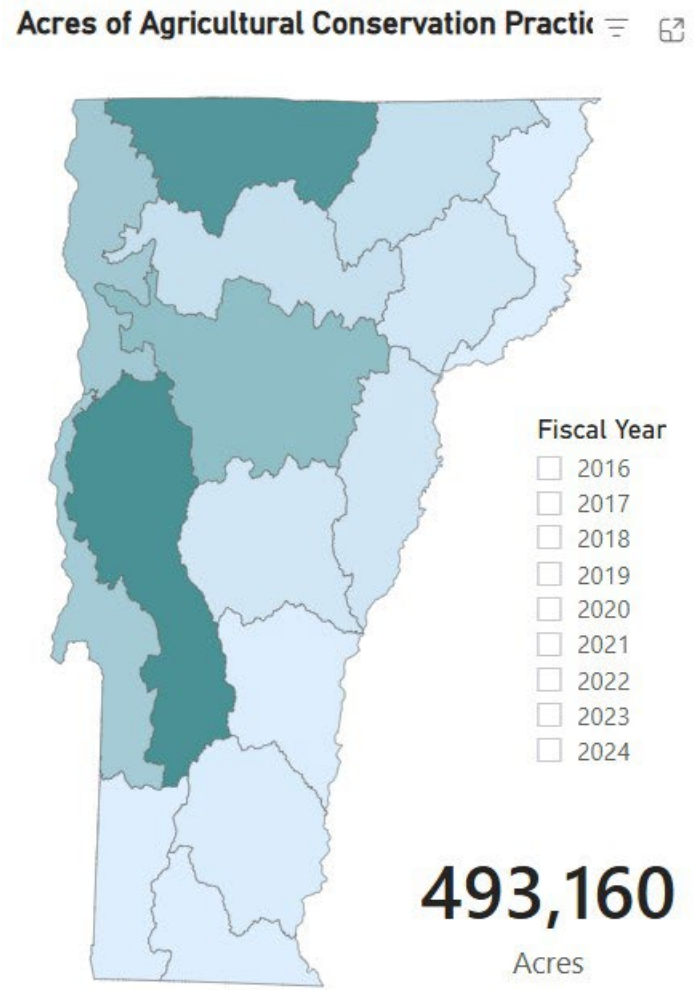
## ENVIRONMENT: FARMLAND

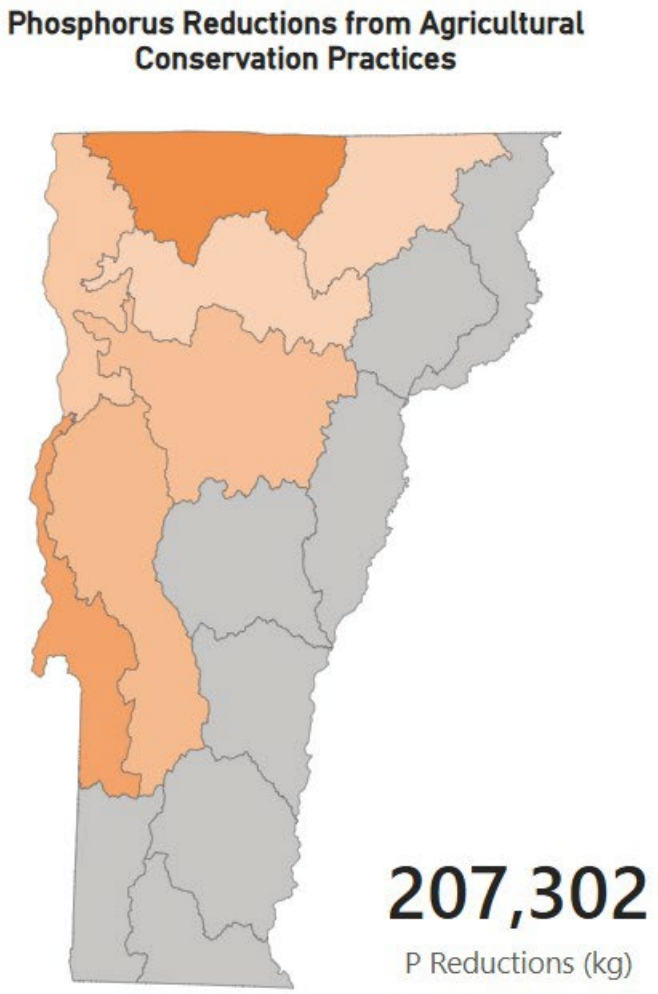
TOTAL ACRES OF FARMLAND, BY LAND USE TYPE 2022



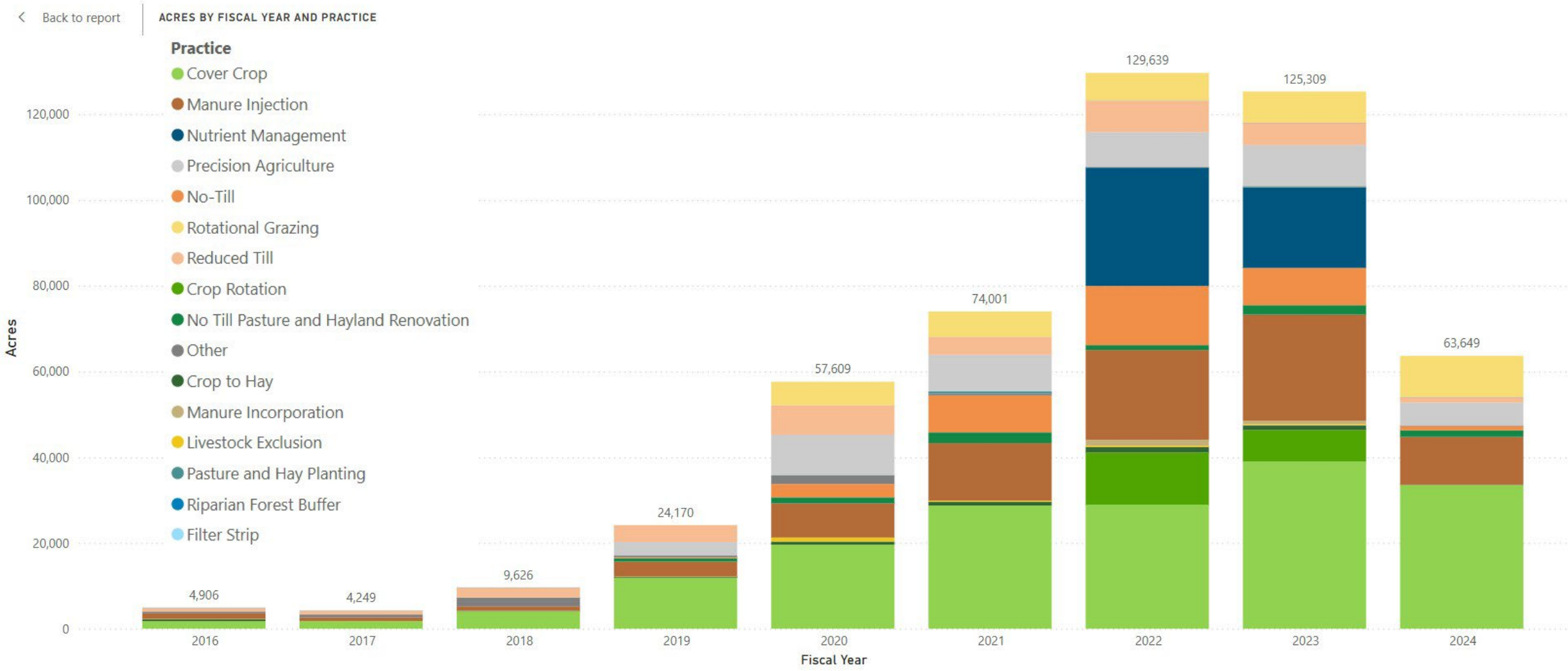

Acreage for animal feed equaled **91.3% (340,155 acres)** of harvested cropland and 29.0% of total land in agriculture. Boosting vegetable, fruit, and grain production—whether in the open or indoors—is one way Vermont could help the region.

## **WATER QUALITY STEWARDSHIP:** ACRES OF CONSERVATION PRACTICES & PHOSPHORUS REDUCTIONS

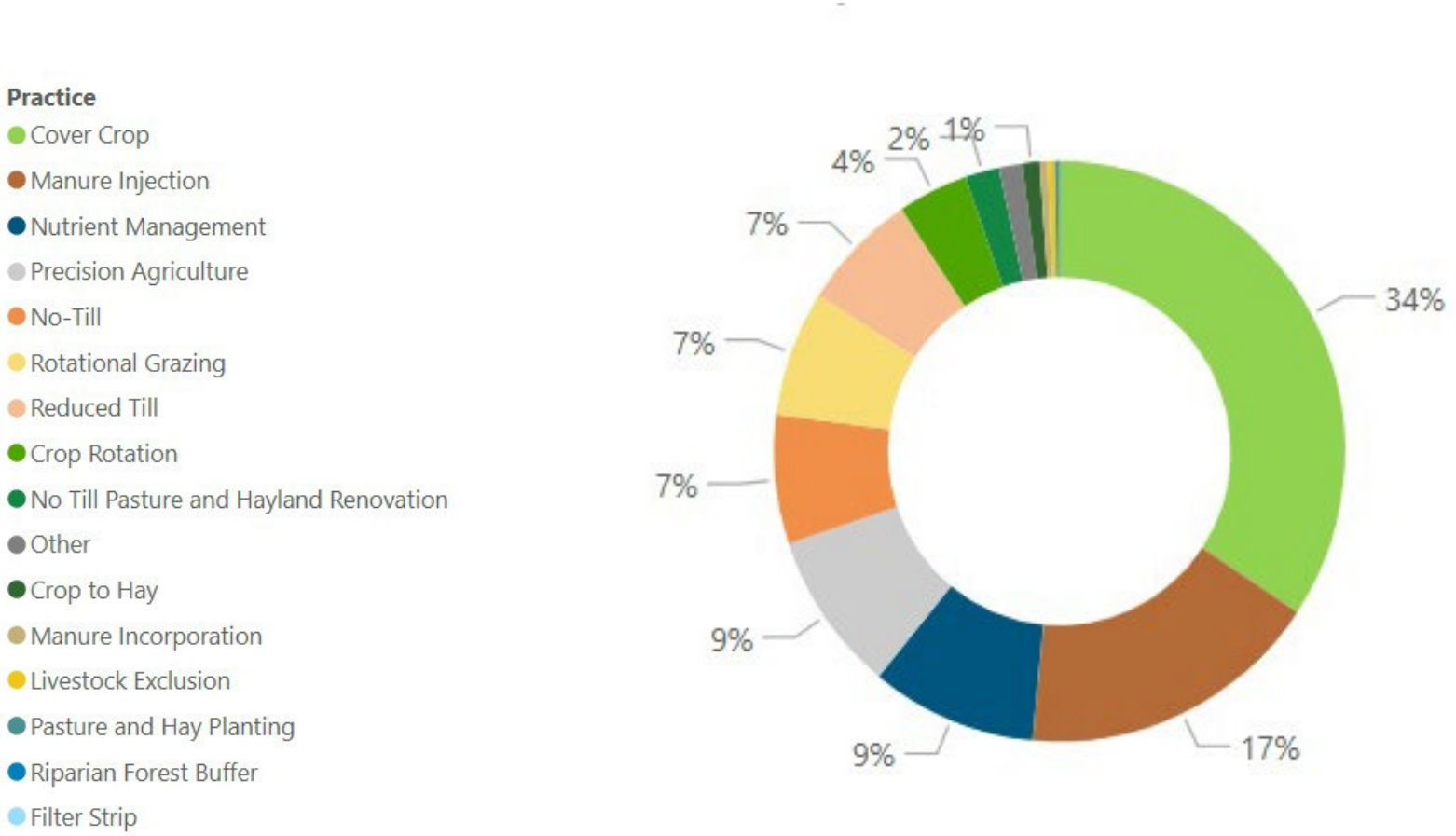


# **WATER QUALITY STEWARDSHIP:** ACRES OF CONSERVATION PRACTICES IMPLEMENTED

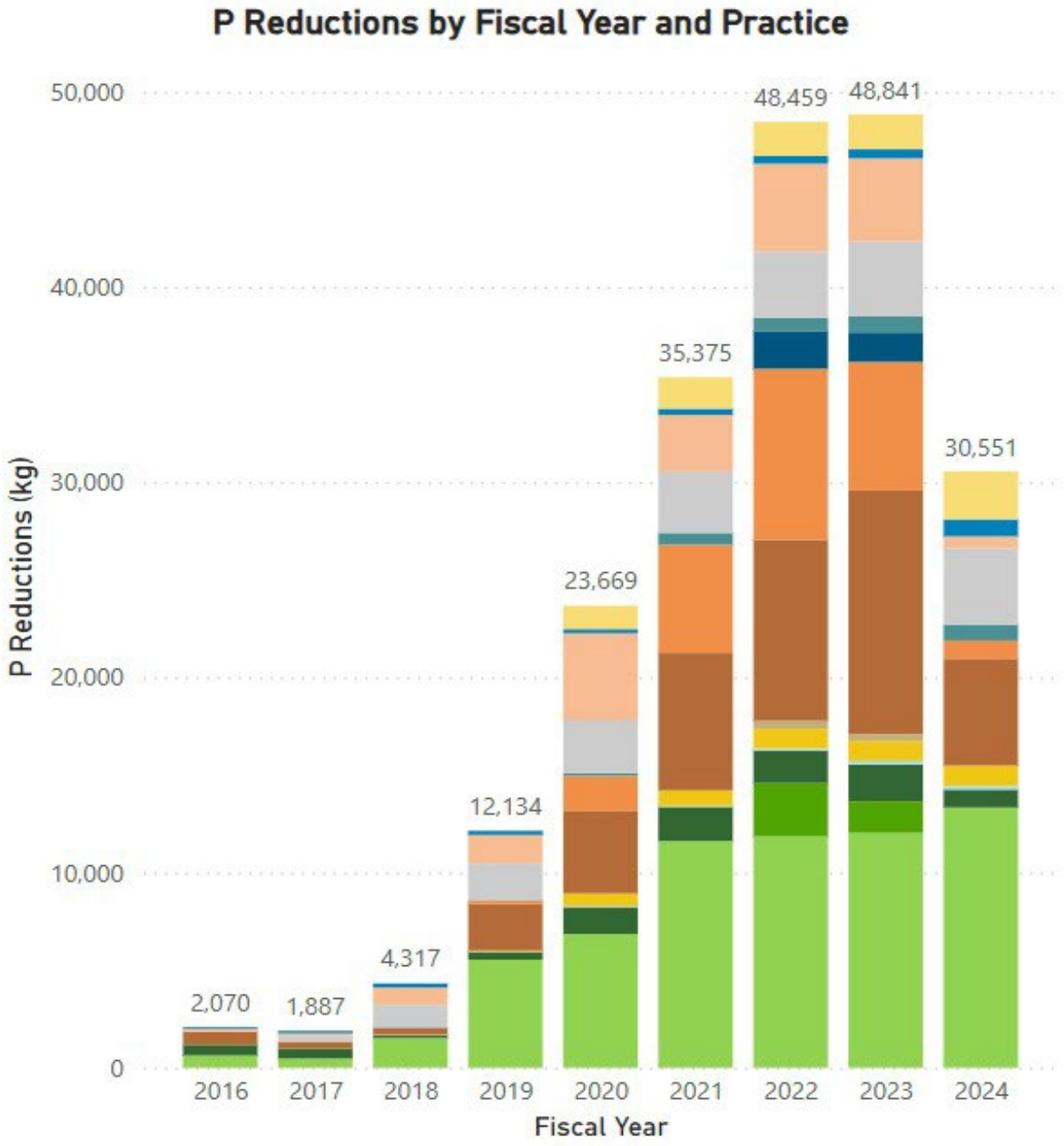


# **WATER QUALITY STEWARDSHIP:** ACRES OF CONSERVATION PRACTICES IMPLEMENTED



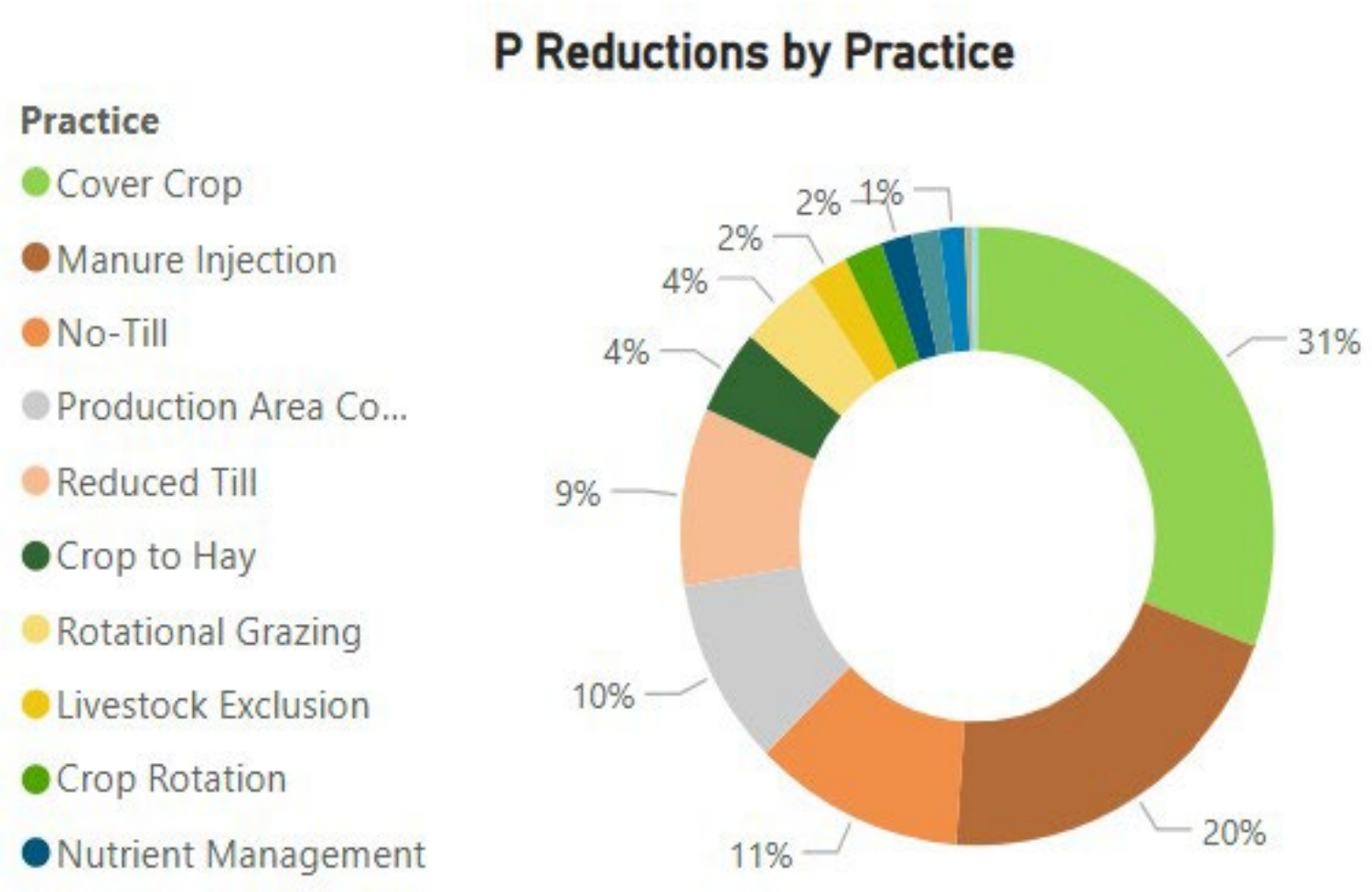
## ENVIRONMENT: WATER QUALITY

PHOSPHORUS REDUCTIONS AND COST EFFECTIVENESS

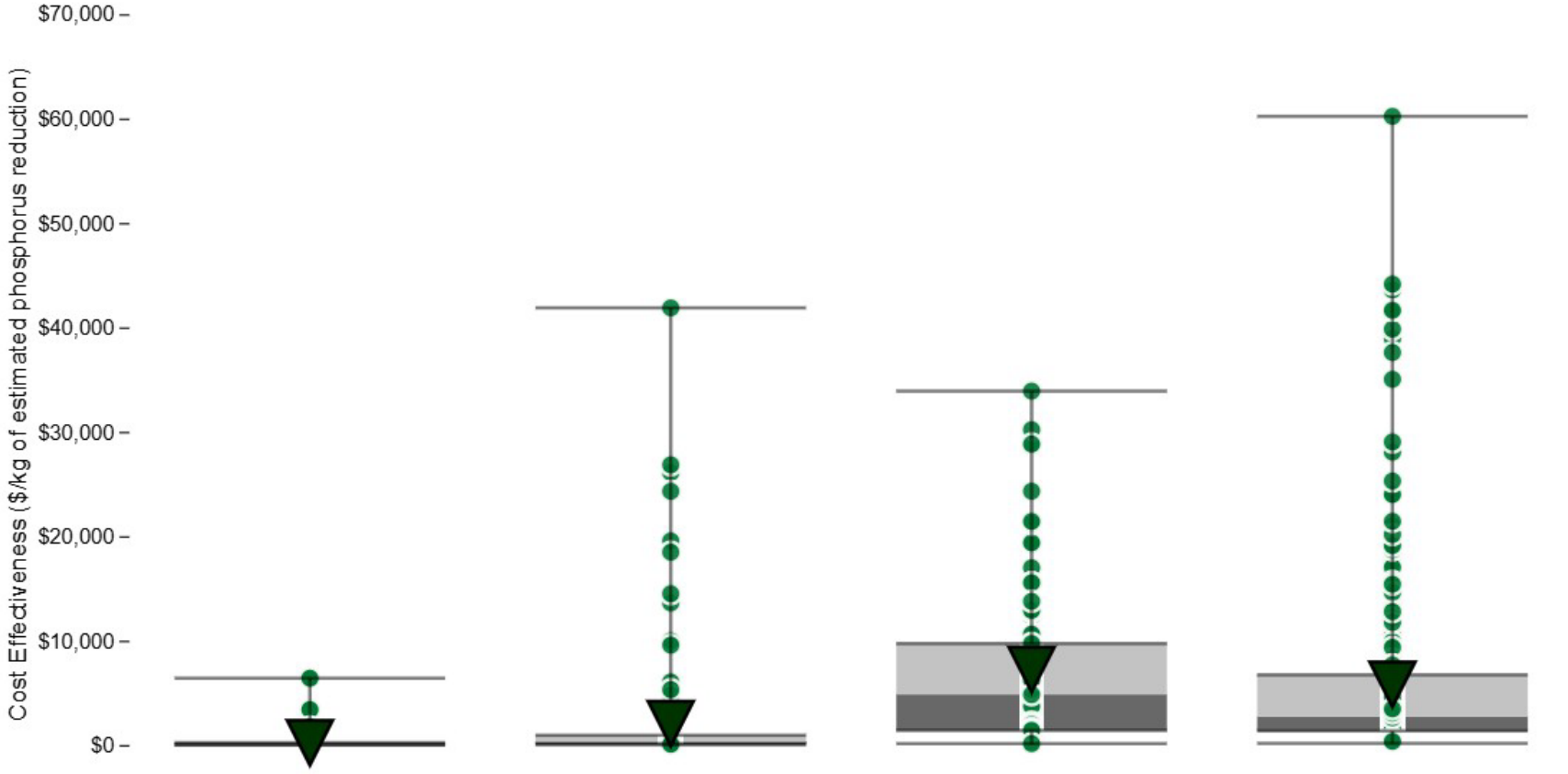




*Due to ongoing projects, data reported in the most recent fiscal year is not complete until the following fiscal year, i.e. fiscal year 2024 data is not complete.*

## **WATER QUALITY:** PHOSPHORUS REDUCTIONS

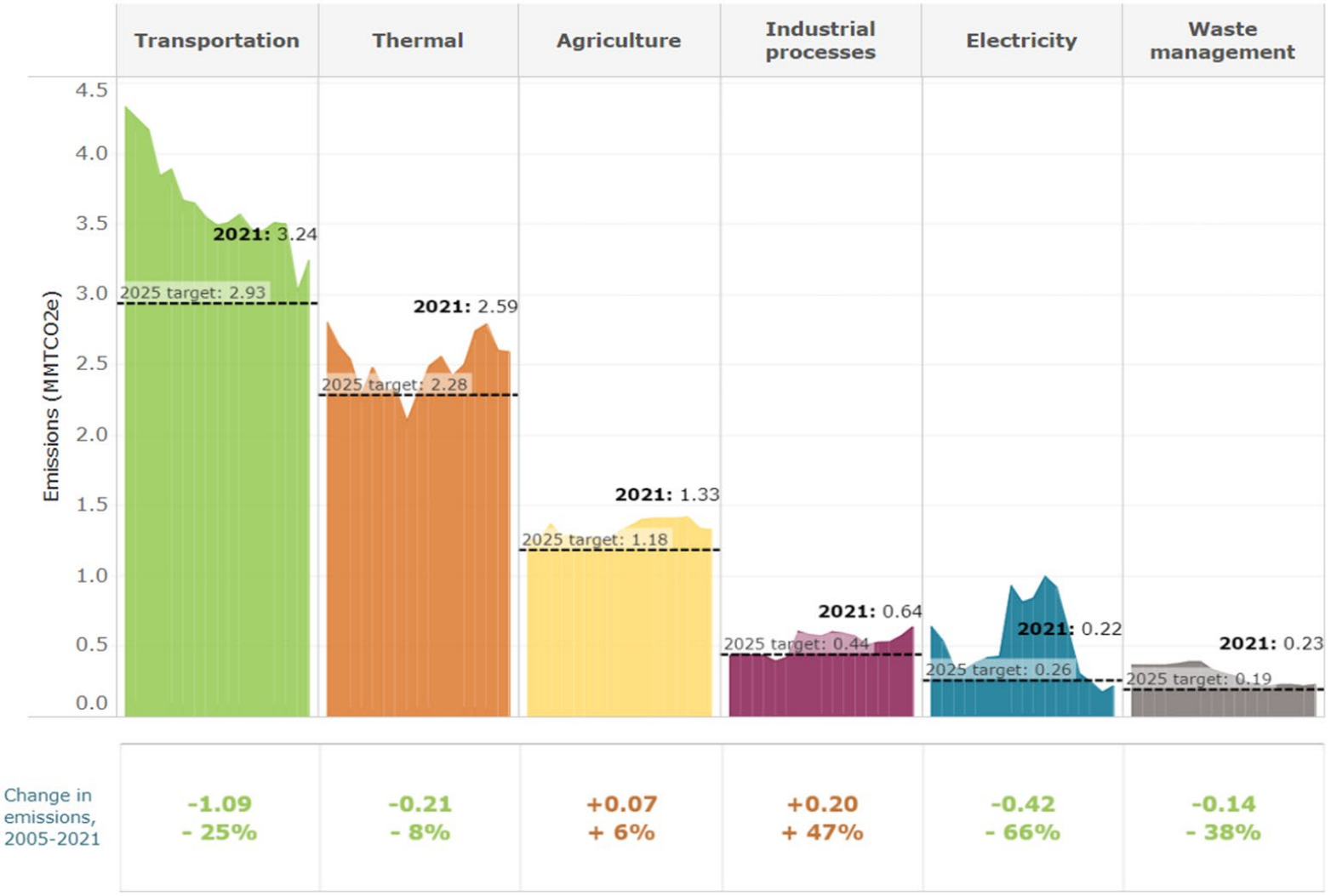


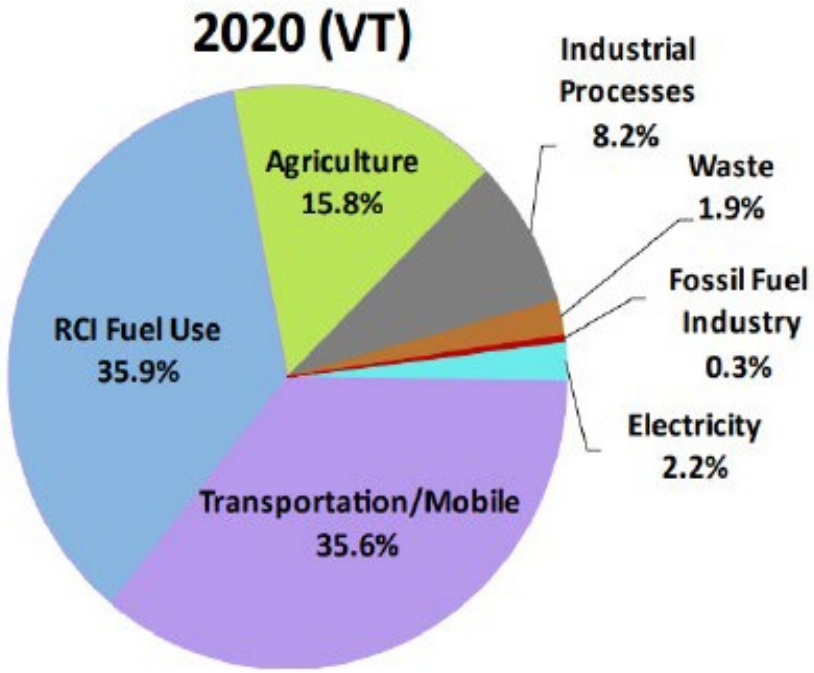
# **WATER QUALITY:** PHOSPHORUS REDUCTION COST EFFECTIVENESS




| | Agriculture | Natural Resources | Stormwater | Transportation Related Stormwater |
|---|---|---|---|---|
| Minimum | $1 | $28 | $132 | $158 |
| Median | $104 | $298 | $4,845 | $2,707 |
| Maximum | $6,399 | $41,865 | $33,896 | $60,208 |

# **CLIMATE:** GHG EMISSIONS



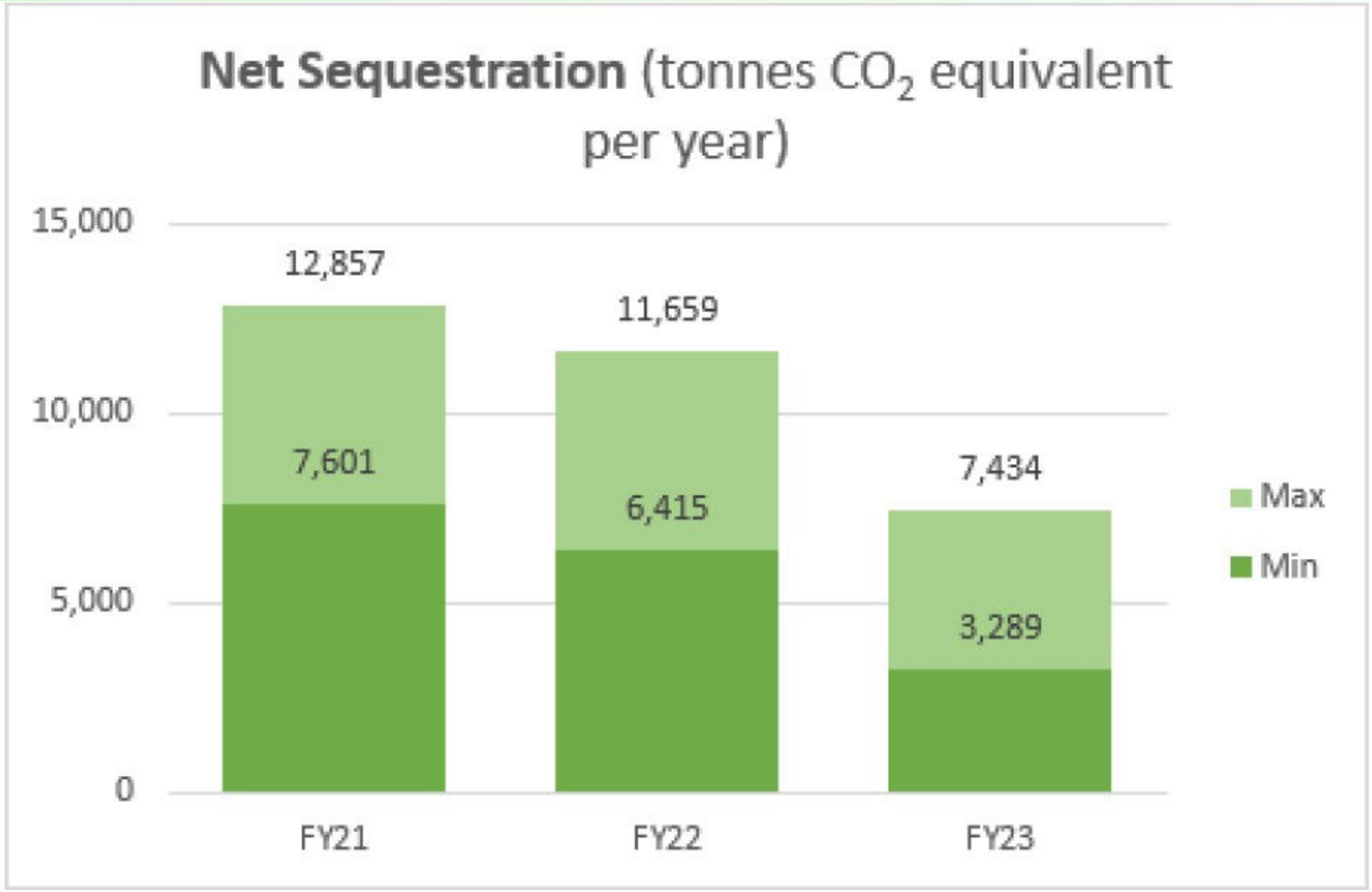



# **CLIMATE:** SOURCES OF GHG EMISSIONS FROM AGRICULTURE


Table 6: GHG emissions contributions of subsectors within the agriculture sector.

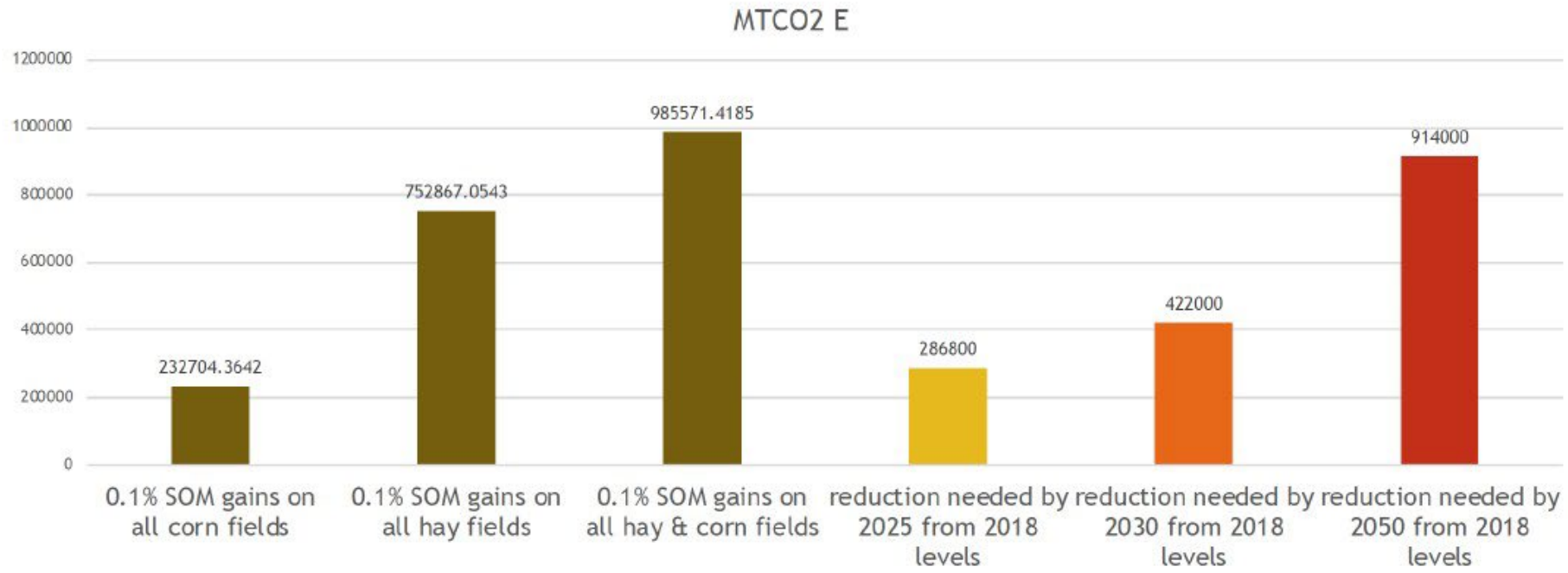
| Sector | Emissions in $MMTCO_2e$ | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1990 | 2005 | 2017 | 2018 | 2019 | 2020 | |
| **Agriculture** | **1.24** | **1.27** | **1.40** | **1.40** | **1.38** | **1.26** | |
| *Enteric Fermentation ($CH_4$, $N_2O$)* | *0.70* | *0.63* | *0.64* | *0.64* | *0.63* | *0.61* | 49% |
| *Manure Management ($CH_4$, $N_2O$)* | *0.18* | *0.33* | *0.35* | *0.36* | *0.35* | *0.33* | 26% |
| *Agricultural Soils ($CH_4$, $N_2O$)* | *0.36* | *0.30* | *0.35* | *0.36* | *0.37* | *0.29* | 23% |
| *Liming and Urea Fertilization ($CO_2$)* | *0.00* | *0.00* | *0.05* | *0.04* | *0.04* | *0.03* | 2% |

## **CLIMATE:** NET SEQUESTRATION FROM WATER QUALITY CONSERVATION PRACTICES




At maximum, sequestration from implemented water quality practices is the carbon equivalent to taking **6,946** cars off the road

# **CLIMATE**: CARBON SEQUESTRATION POTENTIAL FROM ADDING SOIL ORGANIC MATTER




A 0.1% increase in soil organic matter *per year* on corn & hay fields can help Vermont meet its climate change goals in the agriculture sector

The University of Vermont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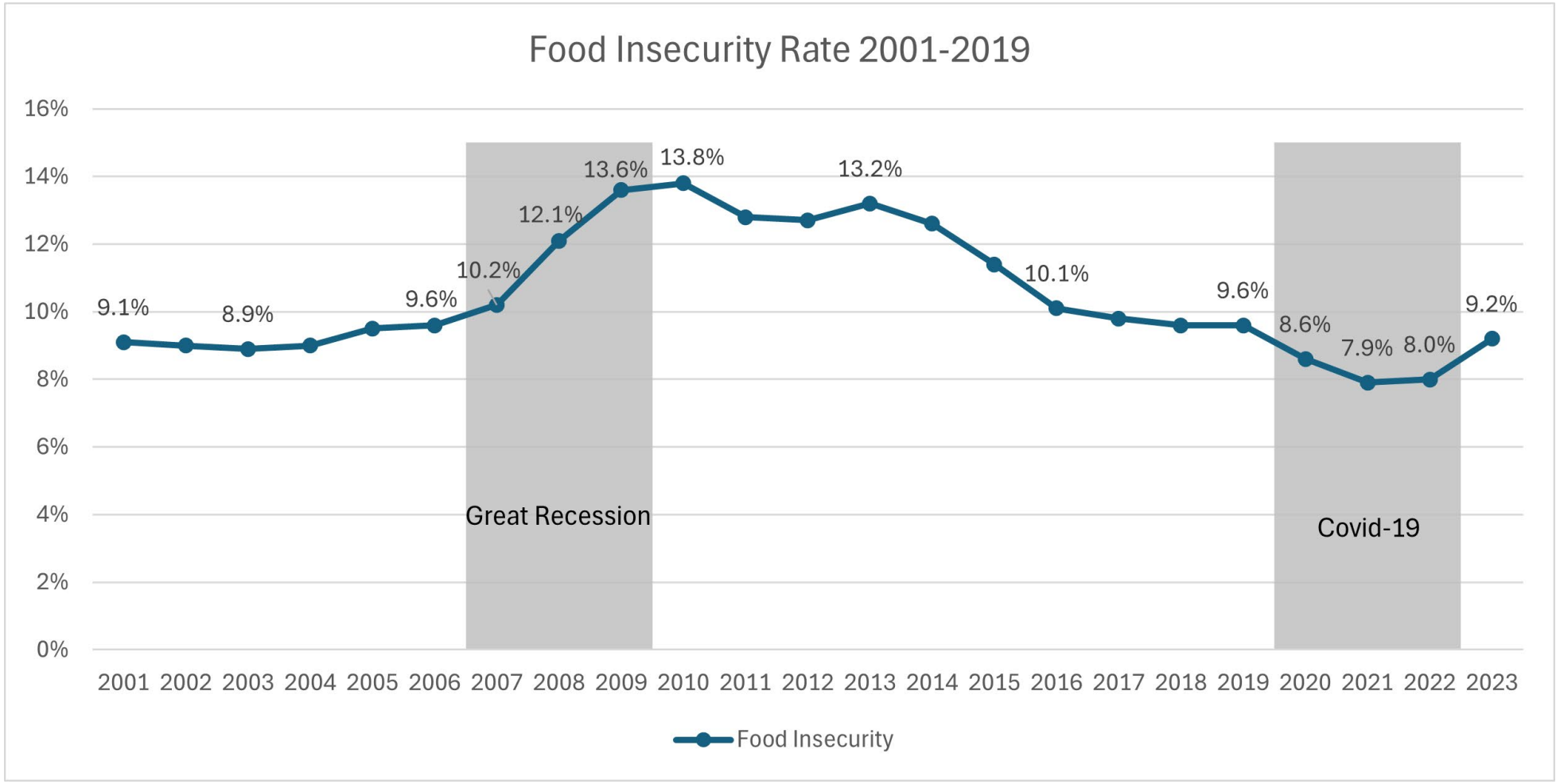
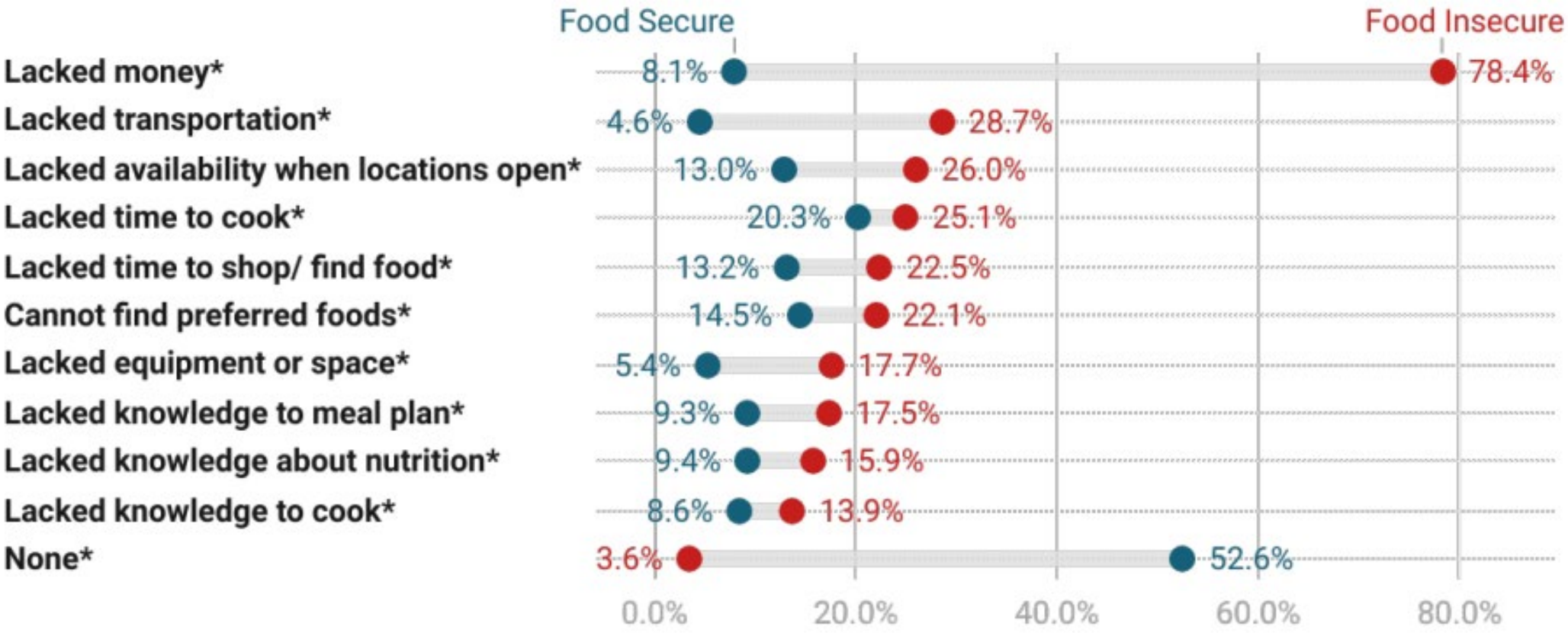
# **FOOD ACCESS AND SECURITY:** USDA FOOD INSECURITY RATE

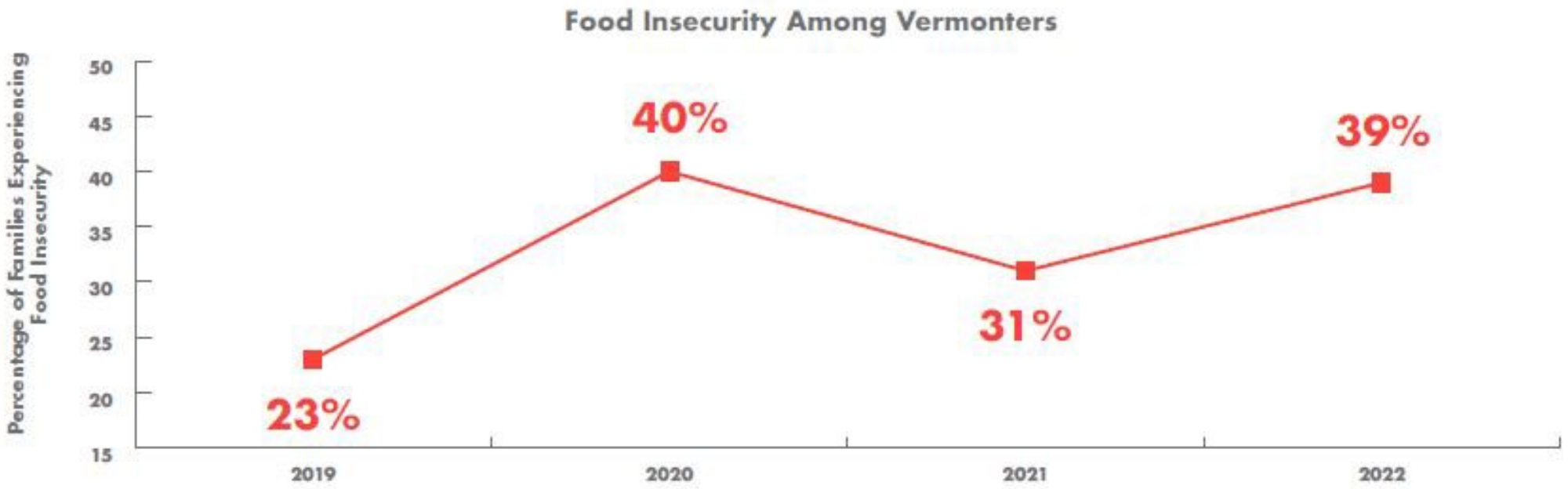



In response to Covid-19, average monthly SNAP benefits per participant increased **102%** in Vermont, from $122 in 2019, to $247 in 2021.

## **FOOD ACCESS AND SECURITY:** FOOD ACCESS CHALLENGES



**FOOD ACCESS AND SECURITY:** SAMPLING FROM NATIONAL FOOD ACCESS AND COVID RESEARCH TEAM (NFACT)

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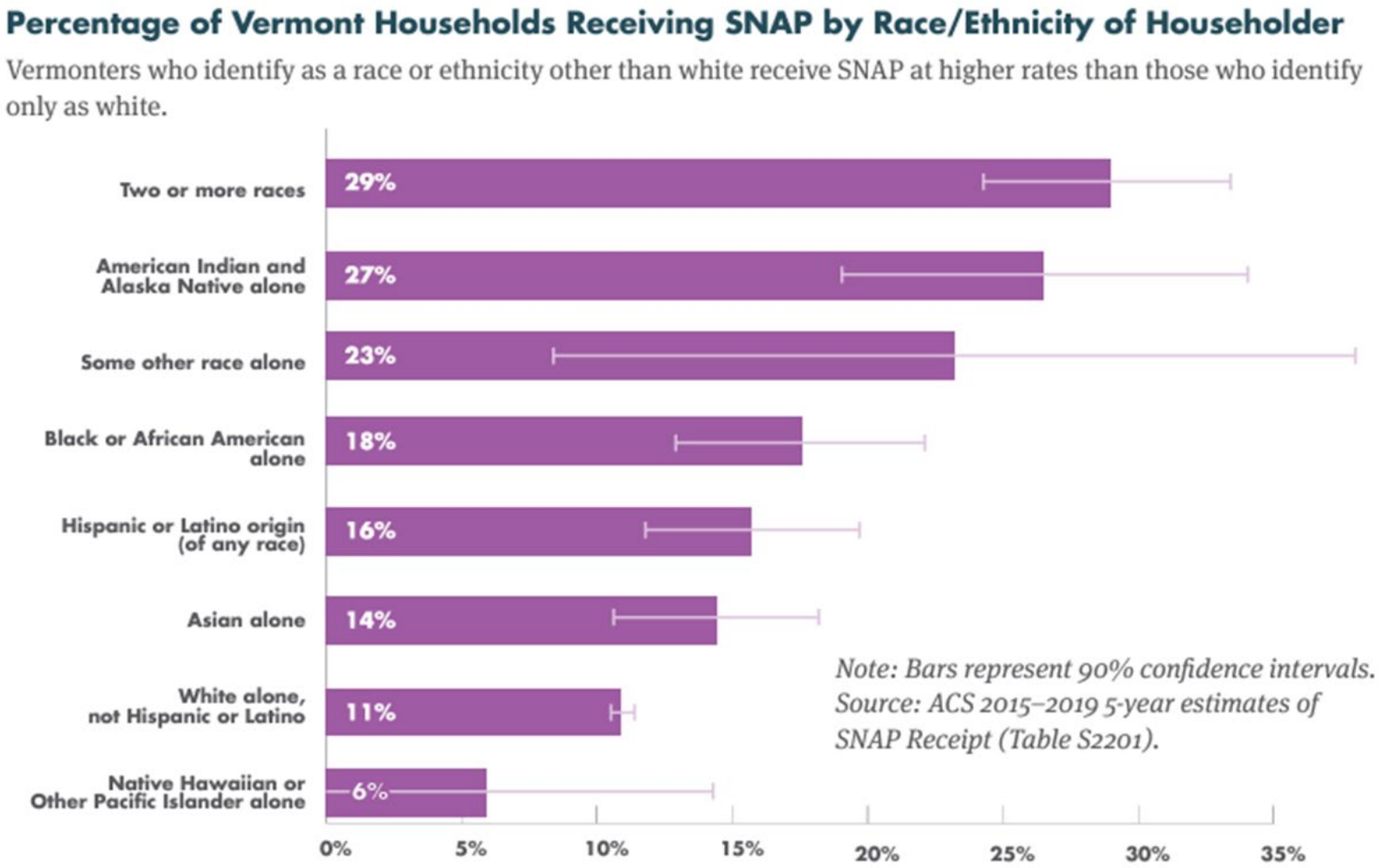
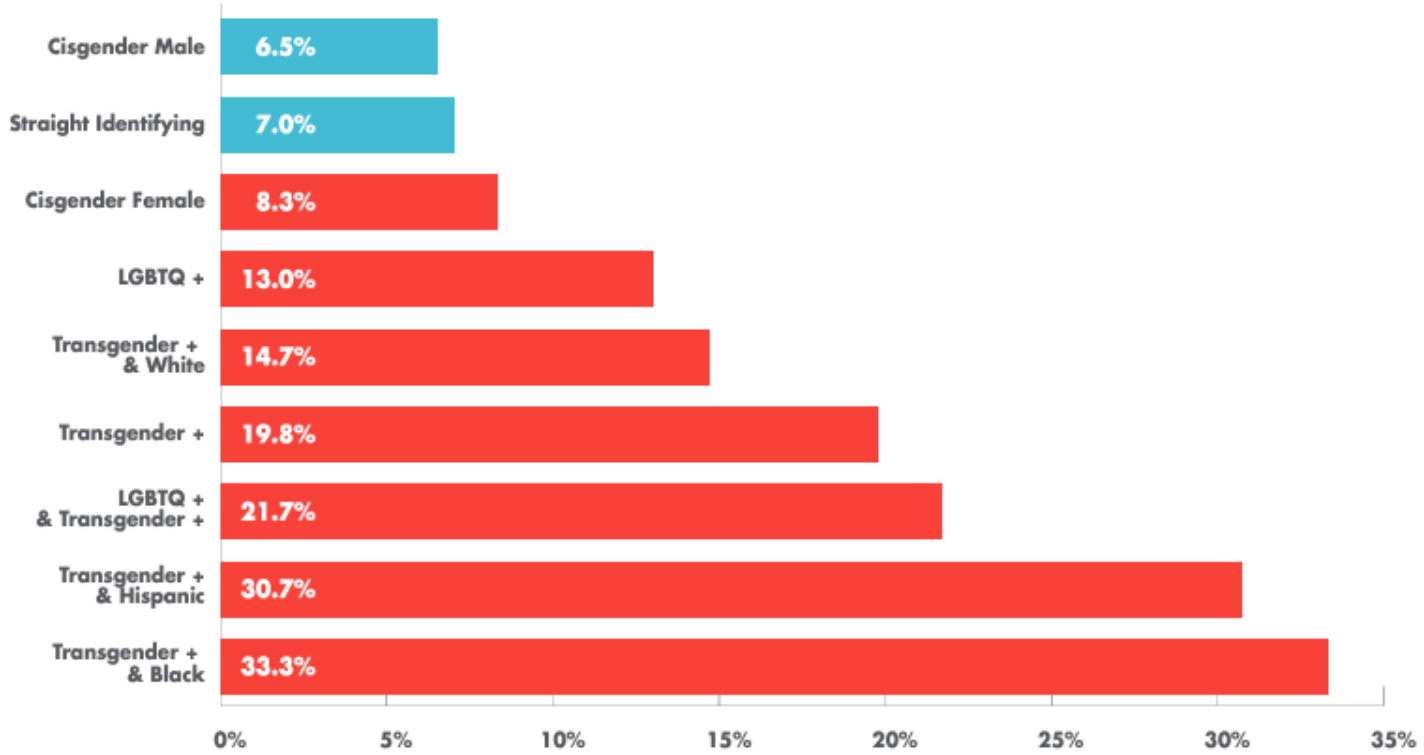
# FOOD ACCESS AND SECURITY: VARIANCES ACROSS DIFFERENT DEMOGRAPHIC GROUPS



# **FOOD ACCESS AND SECURITY:** VARIANCES ACROSS DIFFERENT DEMOGRAPHIC GROUPS

## LGBTQ+ Food Insufficiency in New England

The chart below illustrates research on food security among New England residents who are LGBTQ+. It shows that LGB+ (lesbian, gay, bisexual, and other non-heterosexual) New Englanders experience food insufficiency at nearly twice the rate of heterosexuals. Transgender+ (transgender, genderqueer, gender nonbinary, and other non-cisgender) New Englanders experience food insufficiency at two to three times the rate of cisgender individuals. Additionally, the research found that LGBTQ+ New Englanders of color experience disproportionately higher rates of food insufficiency, with one in three Black transgender+ New Englanders experiencing food insufficiency. Bars in red indicate food insecurity rates above the state average of 8%.



# **FOOD ACCESS AND SECURITY:** VARIANCES ACROSS DIFFERENT DEMOGRAPHIC GROUPS

## Percentage of Vermont Households Receiving SNAP by Disability Status

Households including an individual with a disability received SNAP at more than three times the rate of households with no individuals with a disability (see chart below). Fifty-five percent (55%) of households that received SNAP included one or more individuals with a disability (data not shown).


*Note: Bars represent 90% confidence intervals.*
*Source: ACS 2015–2019 5-year estimates of SNAP Receipt (Table S2201).*

# THANK YOU!