



# Viticulture or Pop Culture?

CULTURAL FACTORS IN THE CALIFORNIA WINE MARKET  
(2003 - 2024)

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- 01** Introduction
- 02** Primer
- 03** Overview
- 04** Data Question
- 05** Case Study:  
The “Sideways Effect”
- 06** Conclusion
- 07** Questions



# About Me



- 01 Wine sales professional
- 02 Creative vision, analytical precision
- 03 Show me the numbers!

# Primer



01 California wine is a global market, going back to the 1800's

02 Different varieties have different characteristics and perceptions

03 Preferred varieties drive the market

# Overview

## Terminology

01

Bearing Acreage

Market (mature vines)

Mature vines produce grapes for **25-30 years**

02

Non-Bearing

Pre-market (immature vines)

03

Total Acreage

Overall Investment (total vines)

Vines need **4-5 years** from planting to bear fruit

## Variables

01

Acreage

02

Variety

Red/White

03

Years

2003-2024

03

Google Search Volume

Proxy for Cultural Engagement

## Metrics

01

Acreage % or Sum

Increase/Decrease

02

Search Frequency

0-100, 0 being no searches

# **How has wine acreage changed over the past 20 years in California, and could cultural events be a factor in changes?**



# Broad Analysis



# Overview



**2004**

Release of *Sideways*

**Bearing**

**875,111** | **938,205**

minimum

maximum

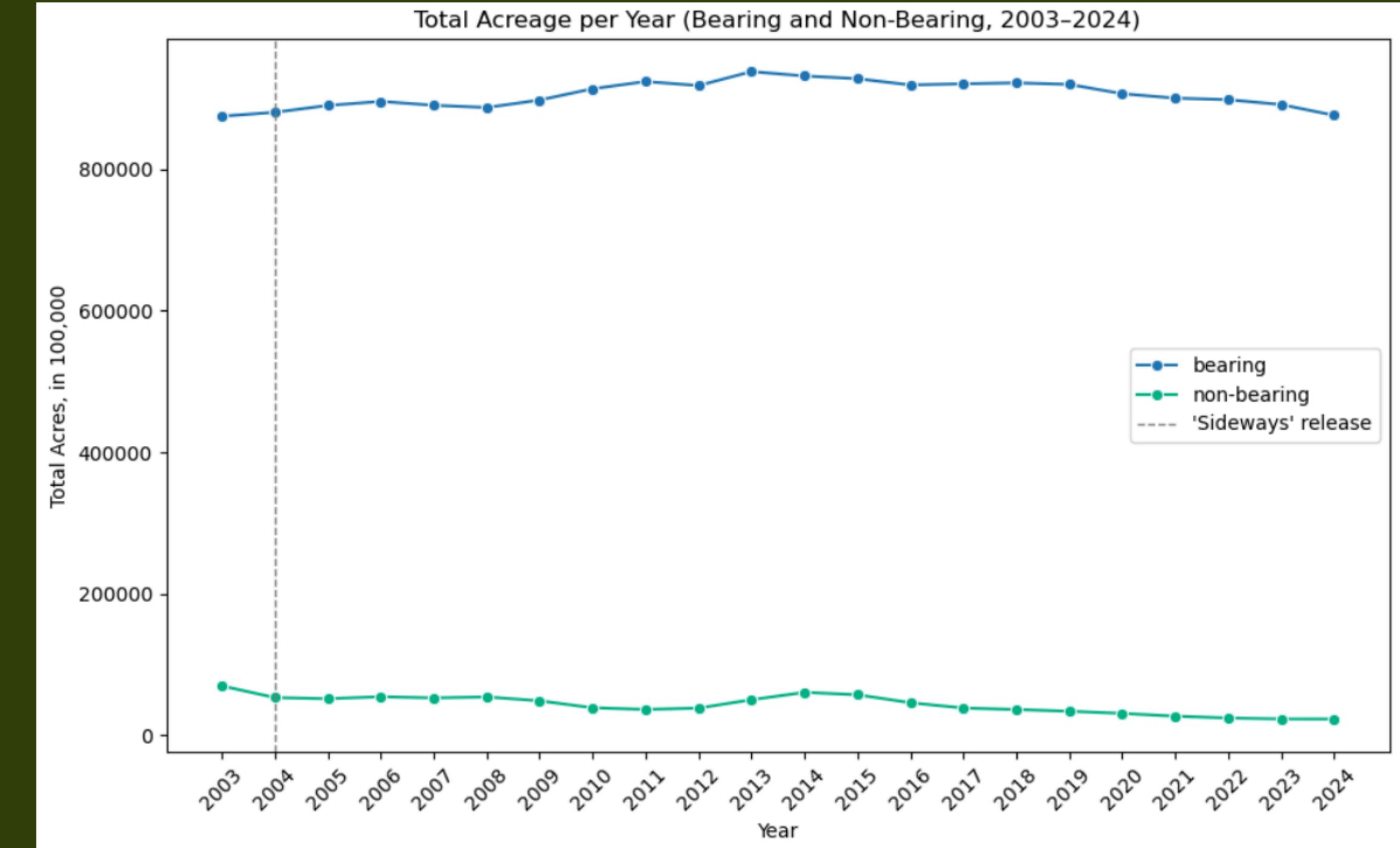
**Non-bearing**

**23,062** | **69,854**

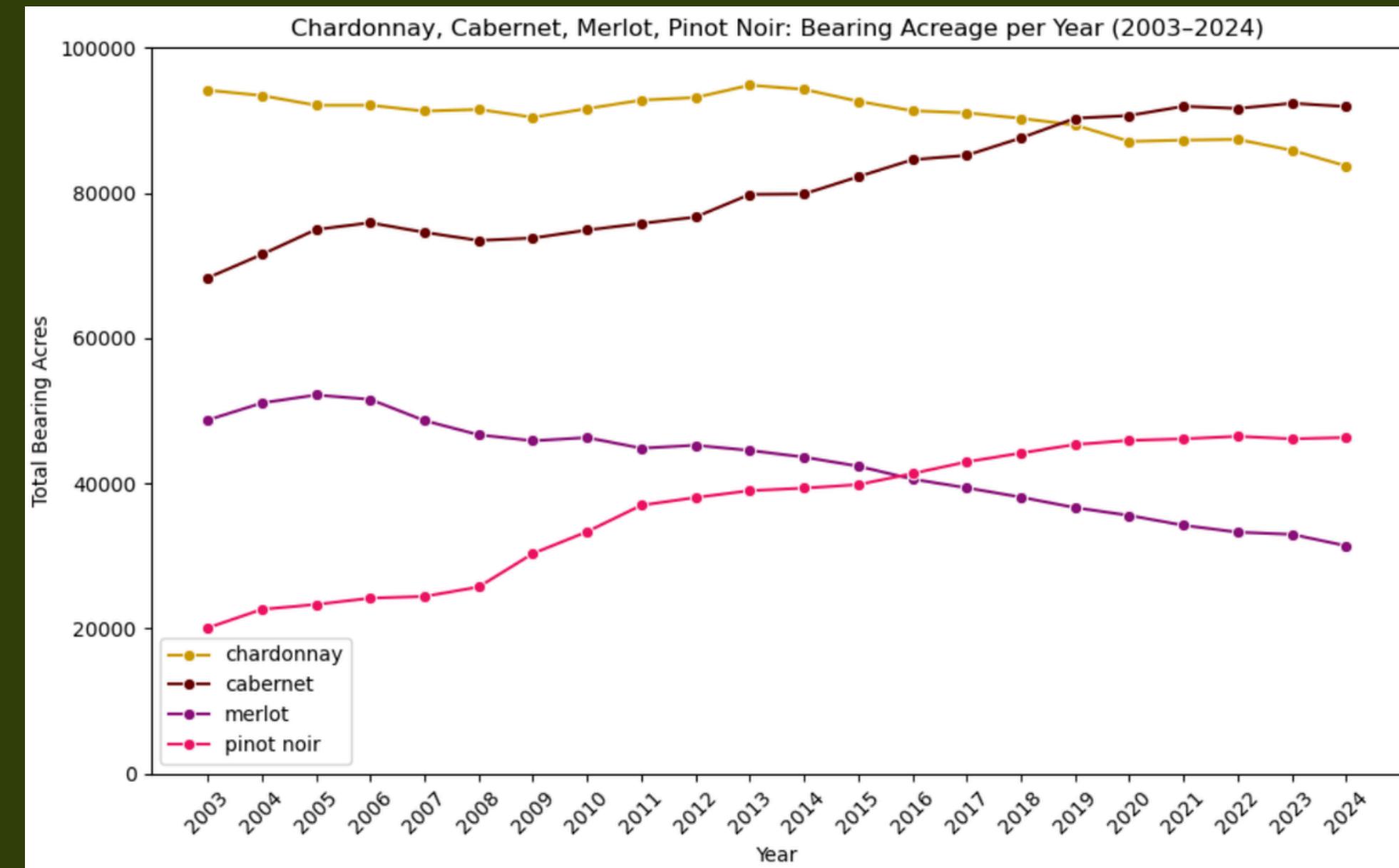
minimum

maximum

Ranges overall are very small



## Grapes in study, overall Bearing Acreage (200-2024)

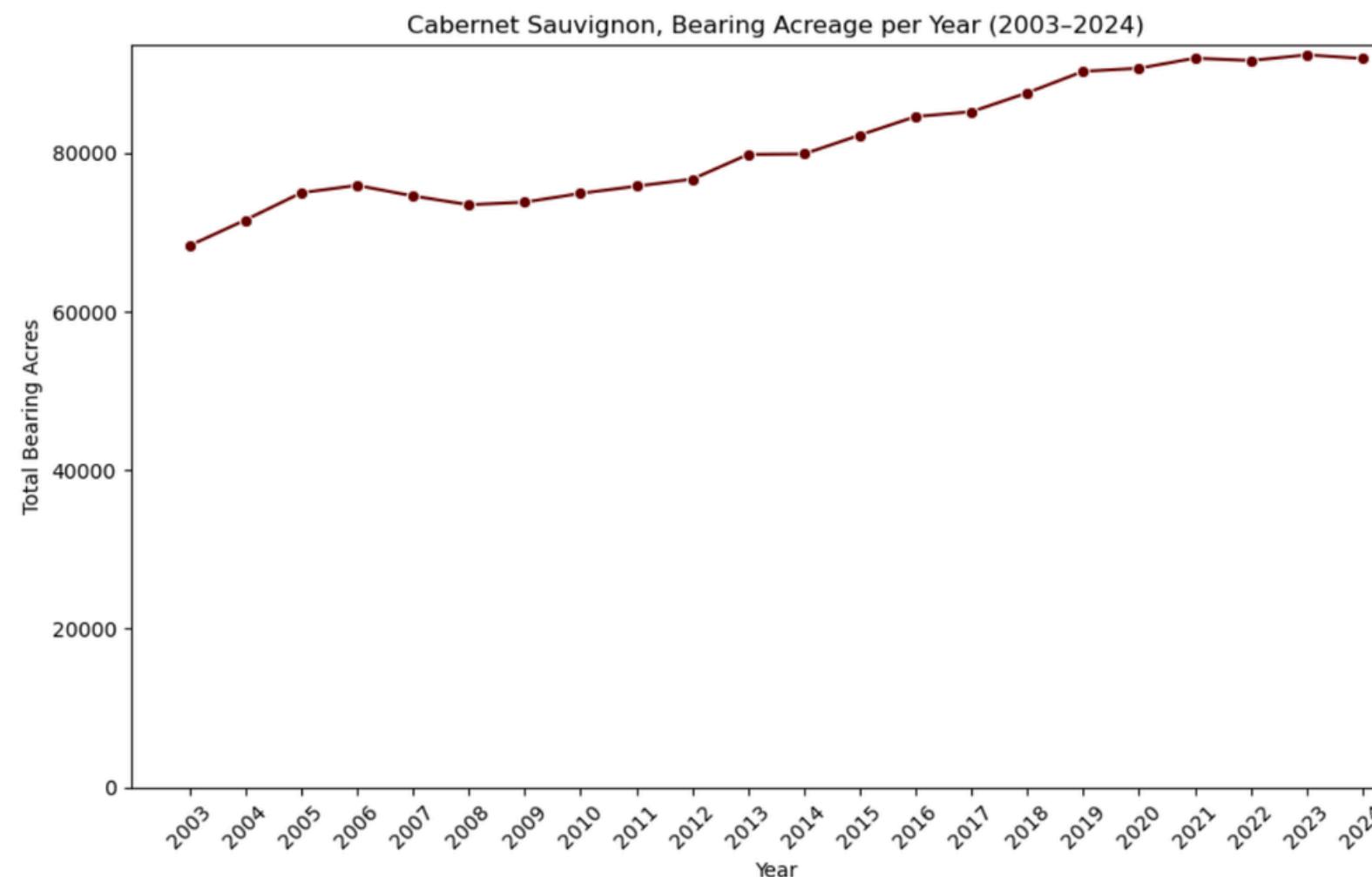


**Chardonnay**  
**94,848**

**Cabernet Sauvignon**  
**87,116**

**Merlot**  
**44,879**

**Pinot Noir**  
**42,059**



**Low Volatility**

**± 1.86%**

standard deviation across years

**Consistent, Gradual Growth in a Small Range**

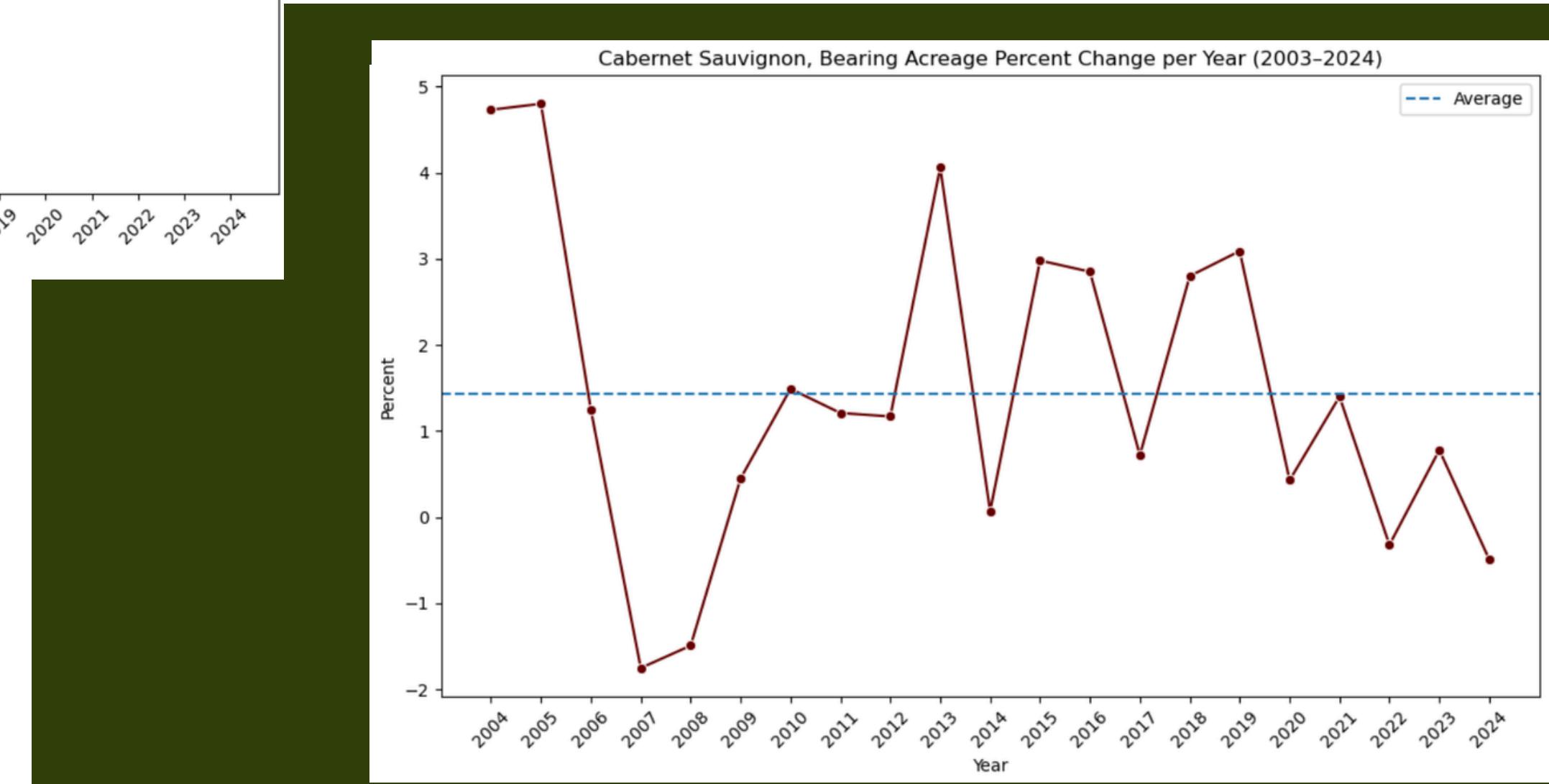
Acres

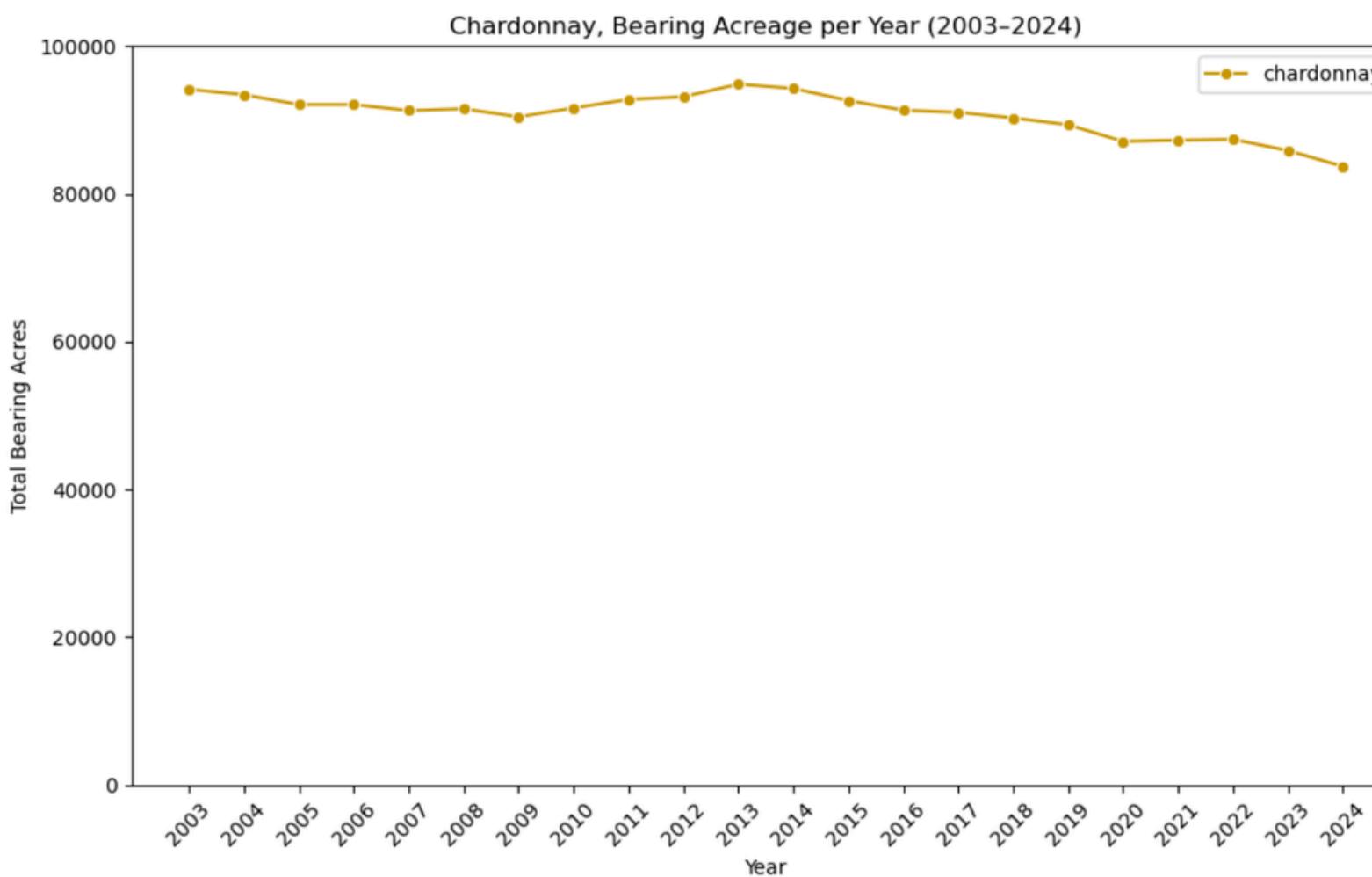
**1124**

average **increase** per year

Acreage %

**1.44%**





**Low Volatility**

**± 1.19%**

standard deviation across years

**Consistent, Gradual Decline with Small Range**

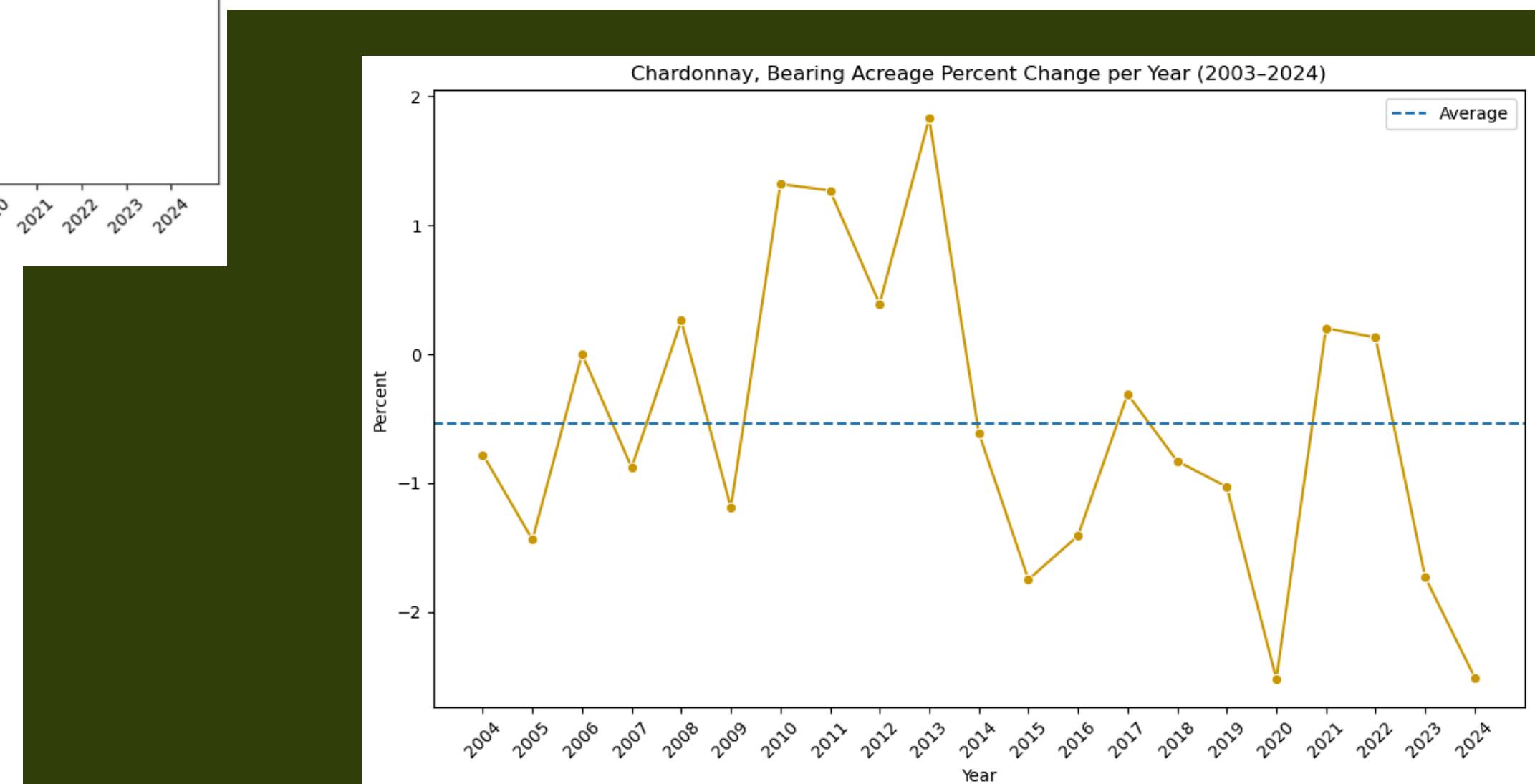
Acres

**-497**

average **decrease** per year

Acreage %

**-0.55%**



**Chardonnay****29.8**

minimum

**64.5**

maximum

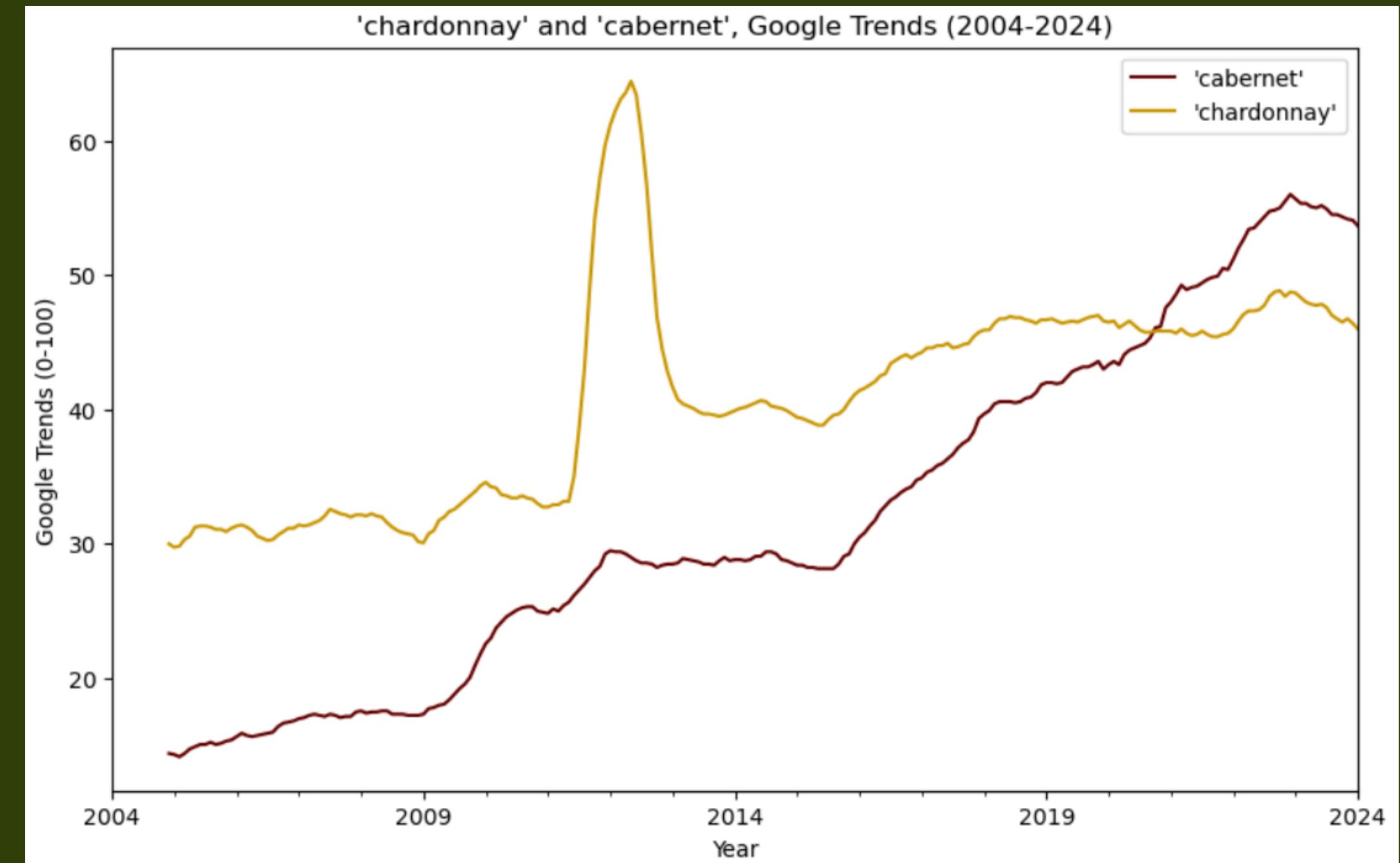
**Cabernet****14.1**

minimum

**55.9**

maximum

Rolling averages used for simplification



# Deep Dive



# Did the movie *Sideways* actually cause Pinot Noir to increase and Merlot to decrease?



# The “*Sideways* Effect”

2004

*Sideways* hits theaters, famously trashing Merlot and complementing Pinot Noir

## Analysis

- 01 Online Engagement
- 02 Bearing Acreage Changes
- 03 Comparisons for Context
- 04 Non-Bearing Acreage Changes
- 05 Insights



01

## 'pinot noir' Engagement Increases Overall...

**Pinot Noir****25.5**

minimum

**60.2**

maximum

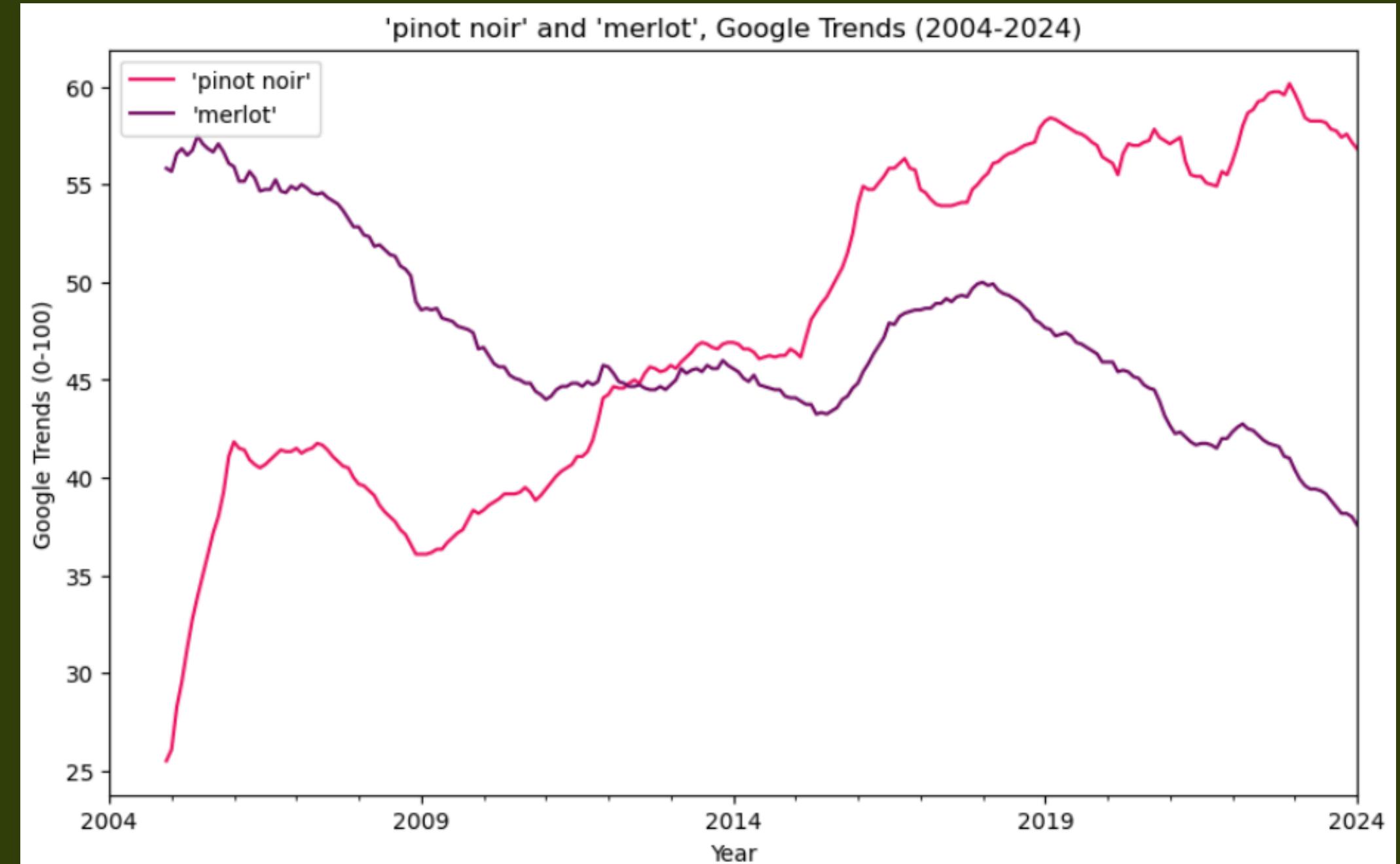
**Merlot****37.6**

minimum

**57.5**

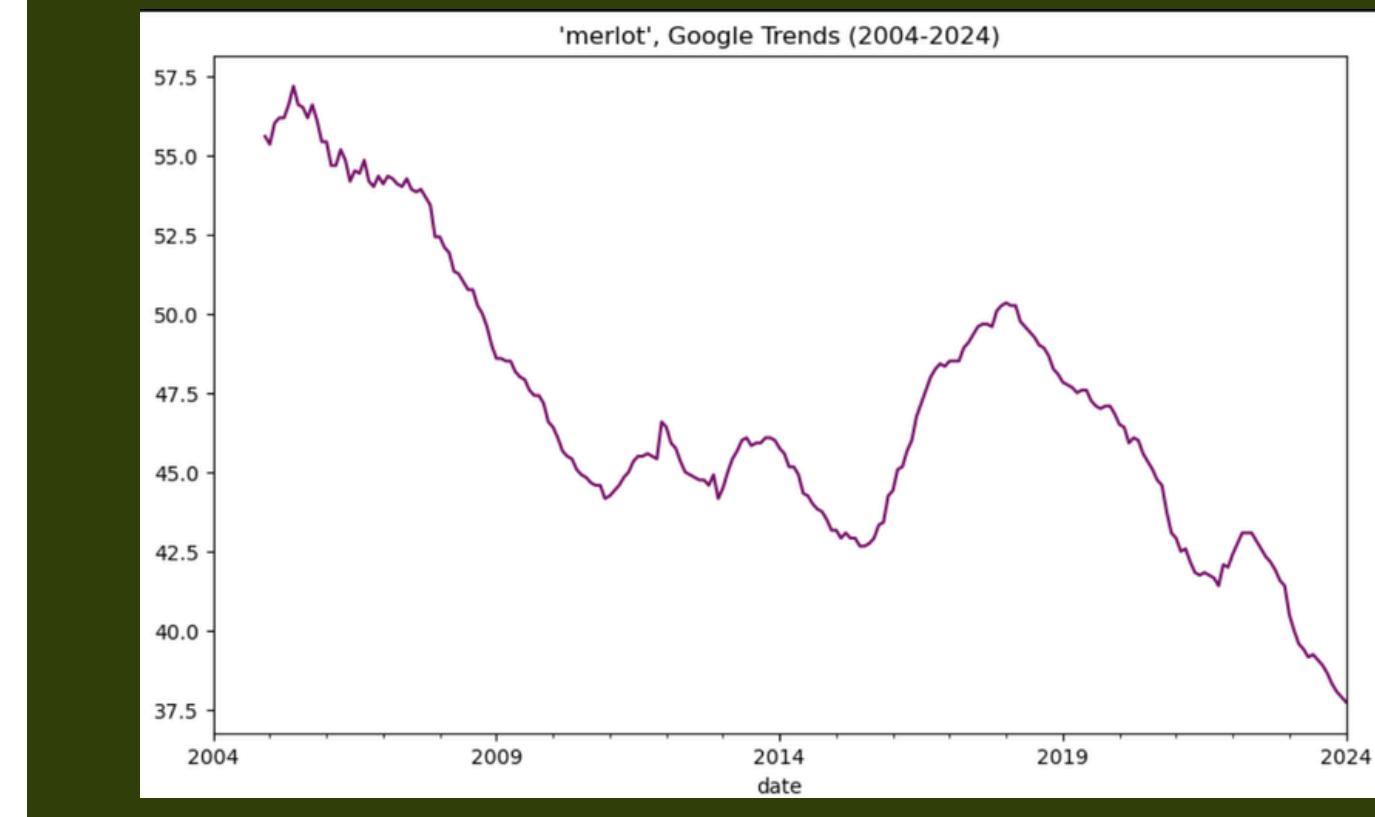
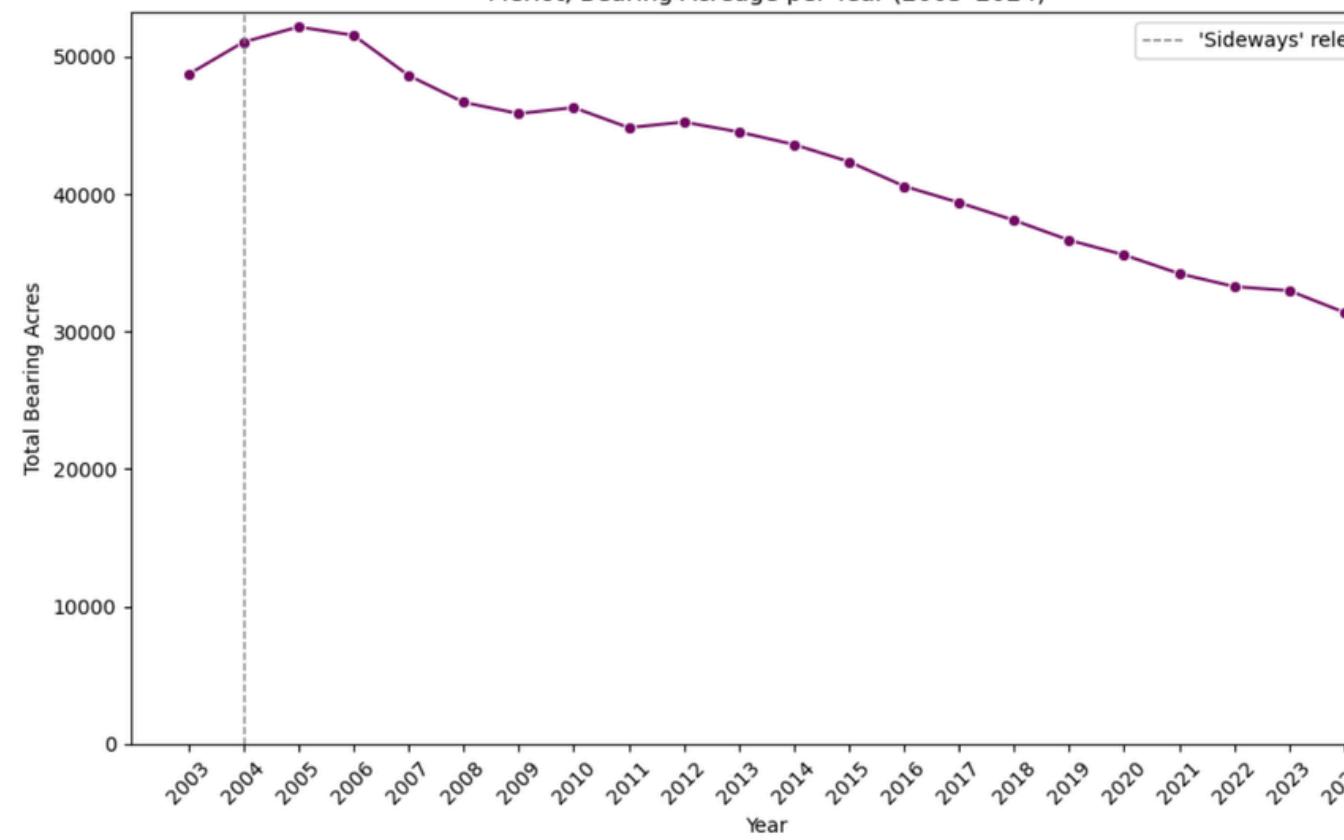
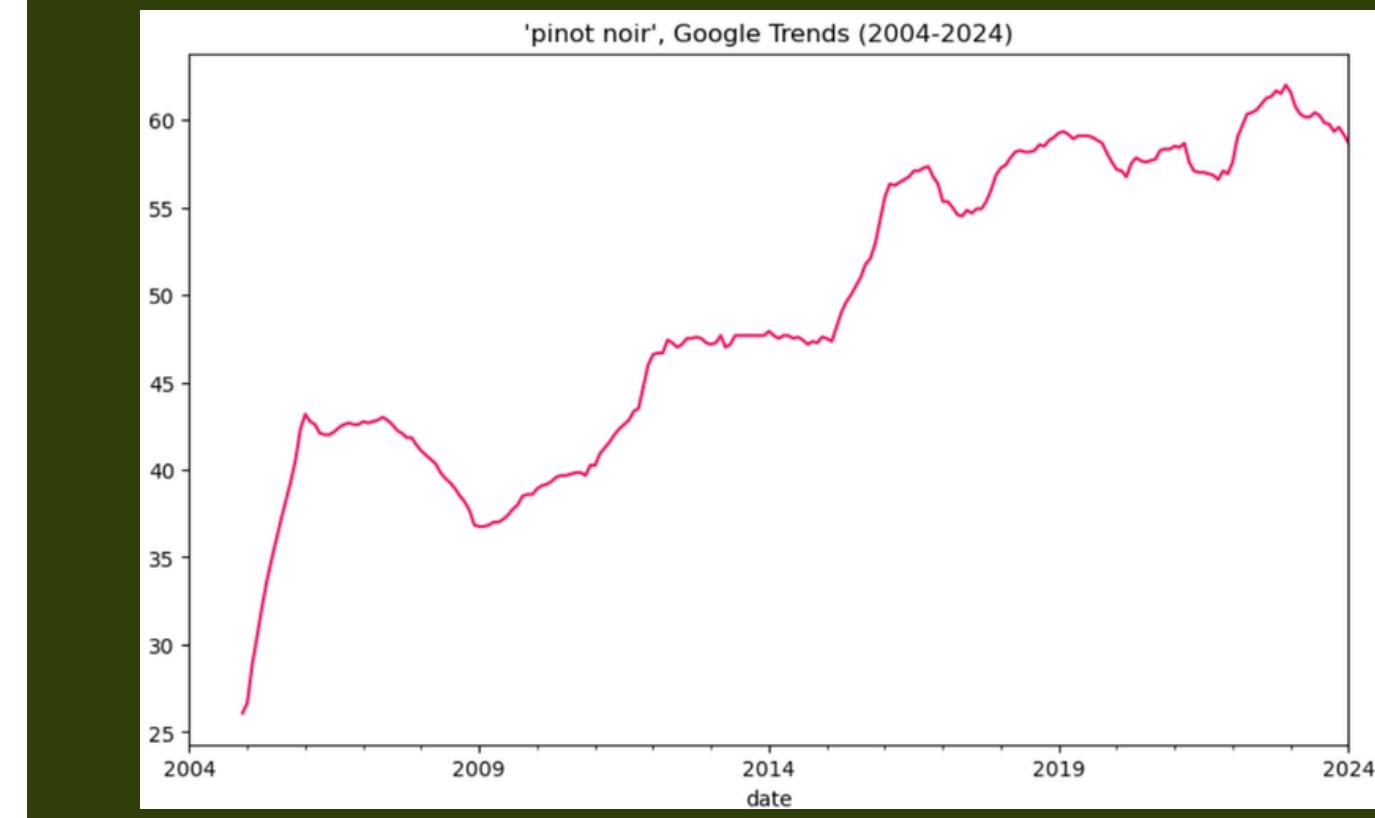
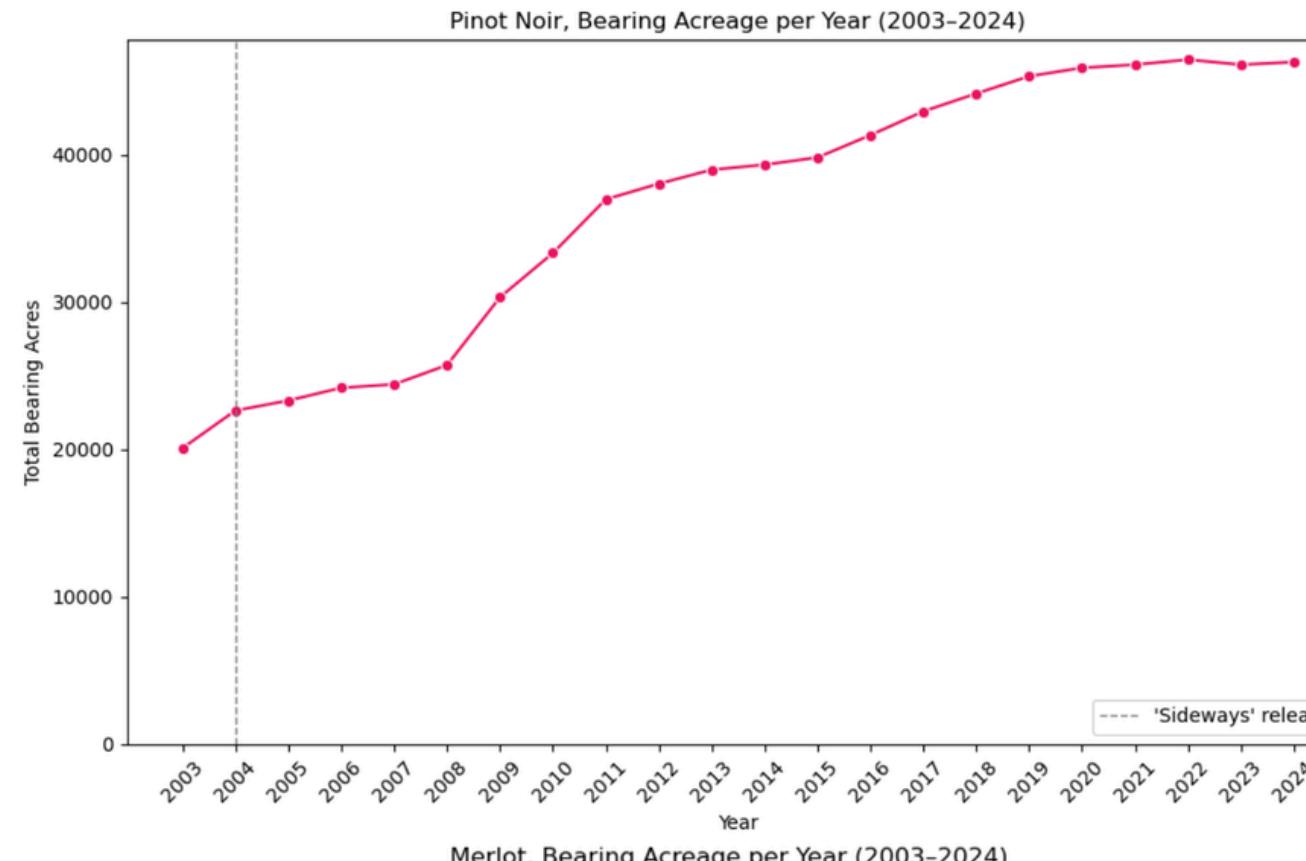
maximum

Rolling averages used for simplification

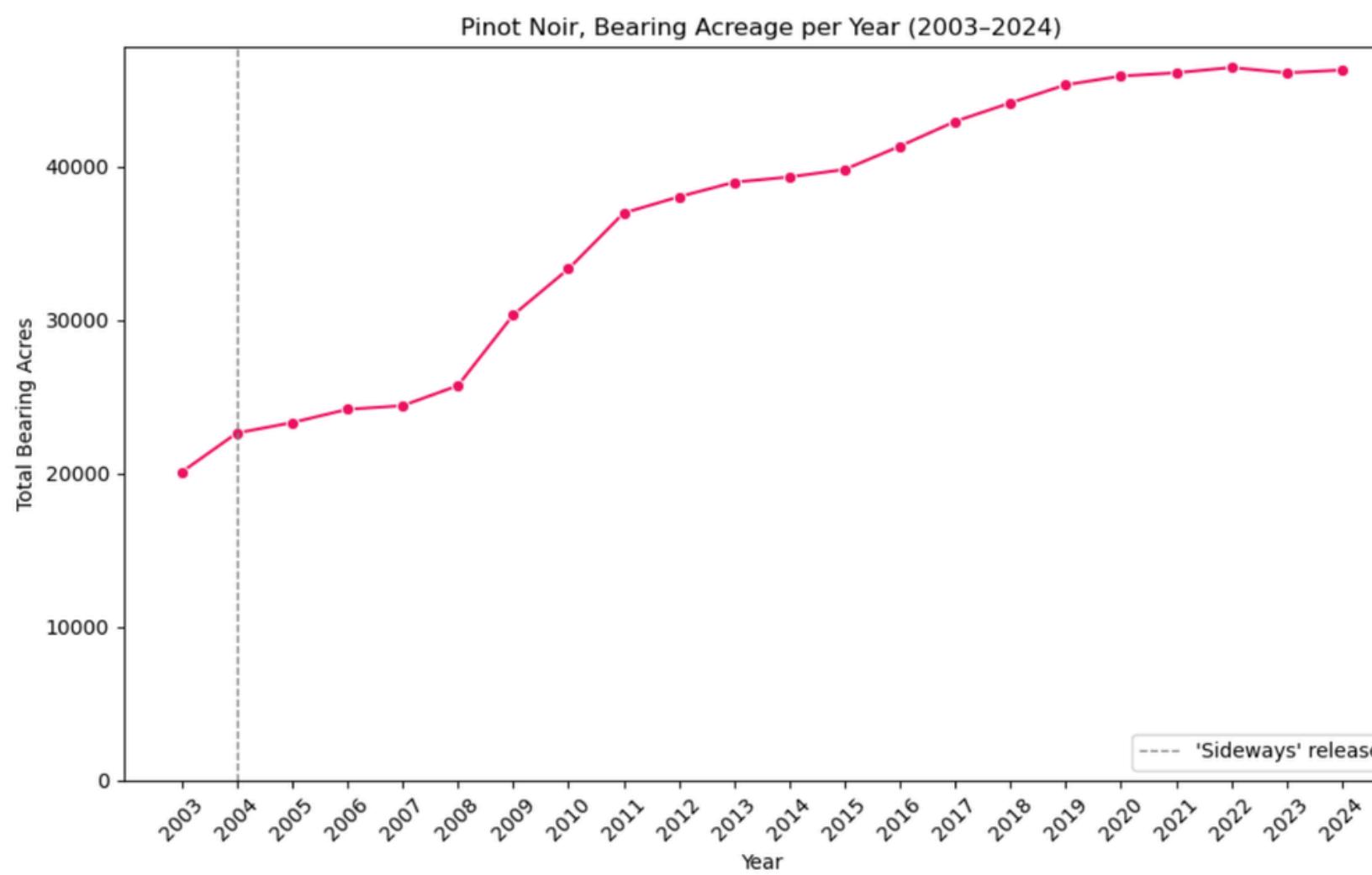


... and 'merlot' Engagement Decreases Overall

# Pinot Noir Bearing Acreage Increases Along with Search Frequency...



... and Merlot Bearing Acreage Decreases Along with Search Frequency



**Very High Volatility**

**± 4.76%**

standard deviation across years

## Consistent, Dramatic Growth with Wide Range

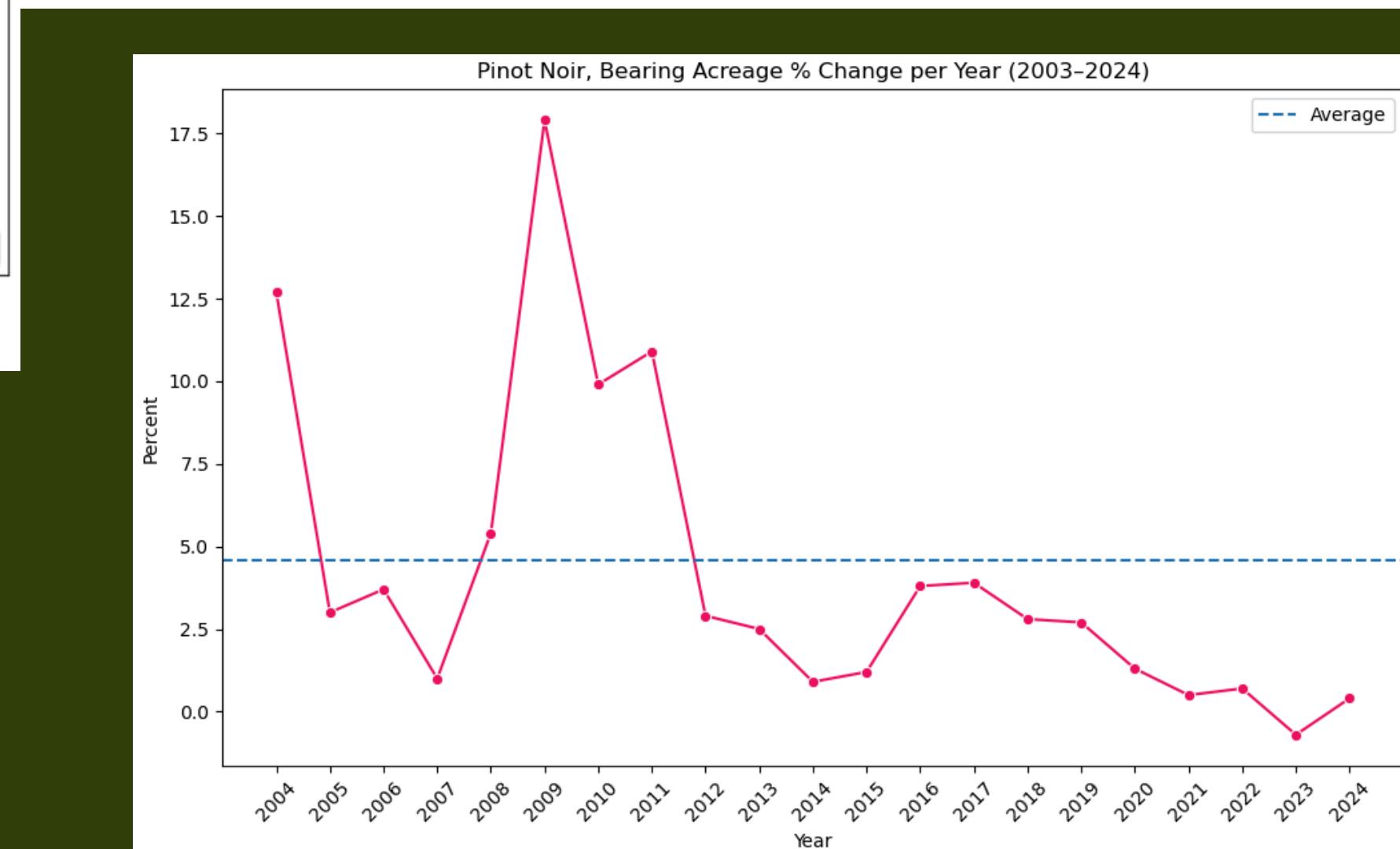
Acres

**1229**

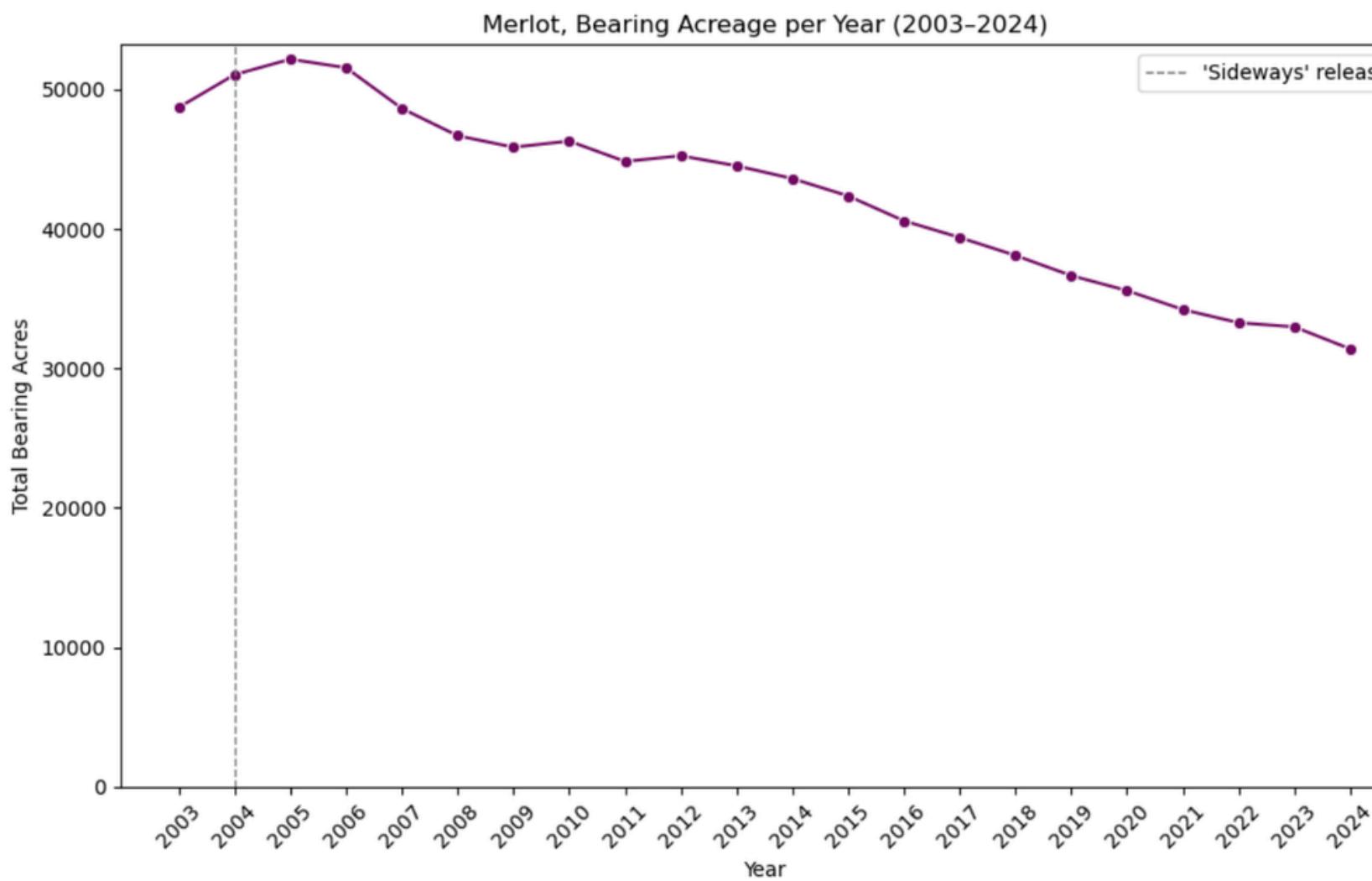
Acreage %

**4.16%**

average **increase** per year



# Merlot, Bearing Acreage Changes



**High Volatility**

**± 2.51%**

standard deviation across years

**Consistent, Notable Decline with Wide Range**

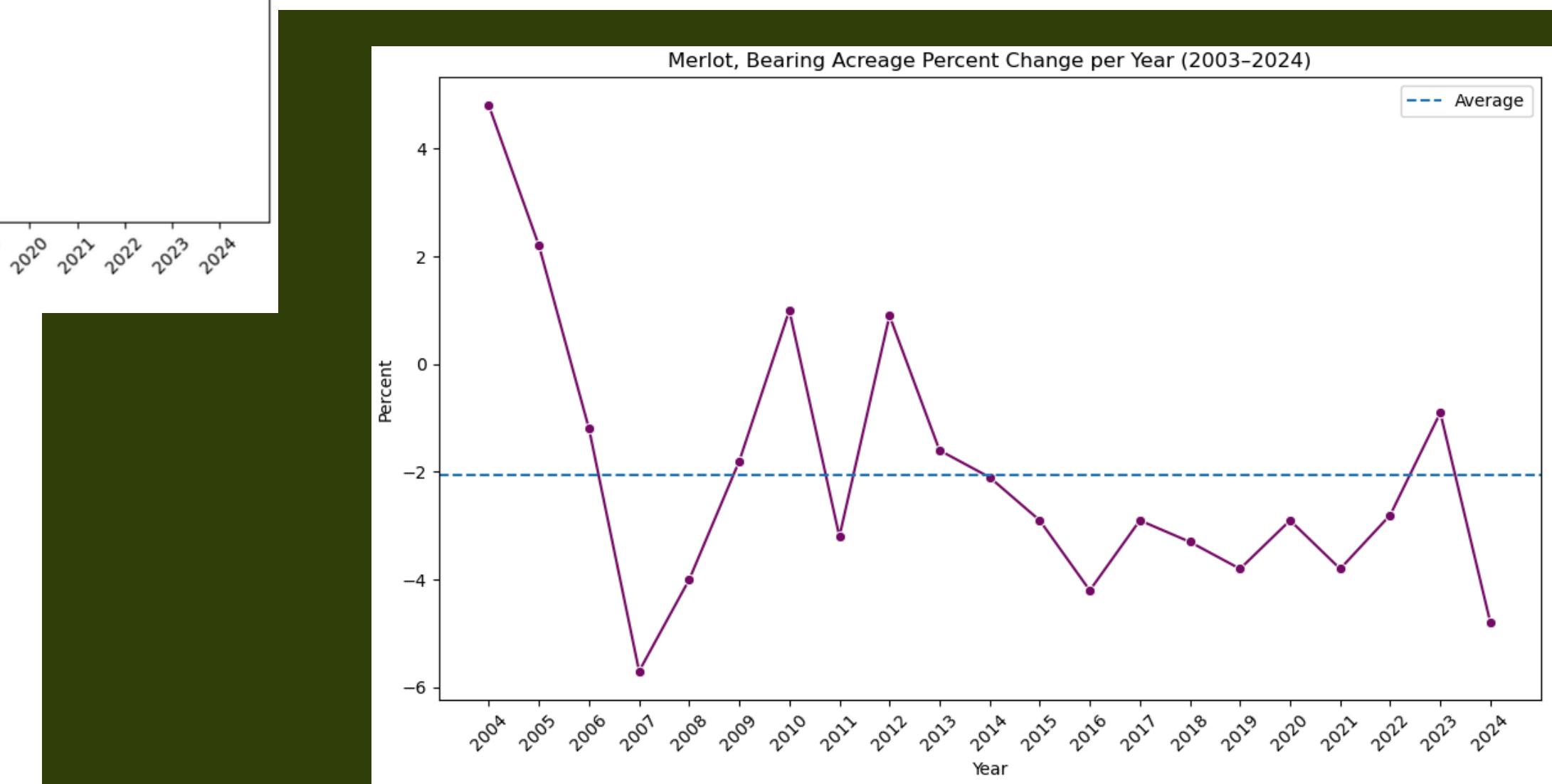
Acres

**-825**

average **decrease** per year

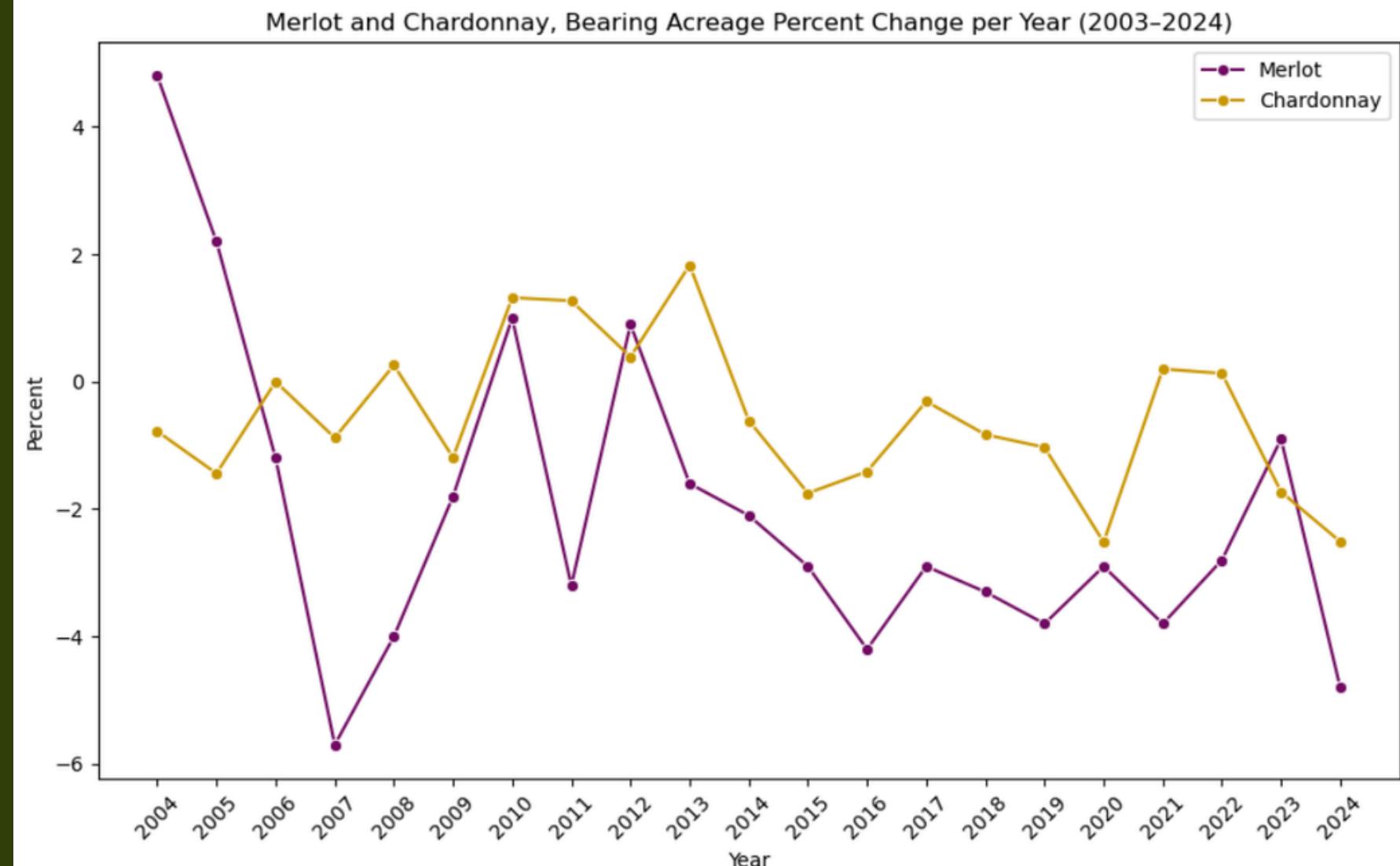
Acreage %

**-2%**



Merlot, Bearing Acreage Changes as Percent

# Merlot



Acres

**-825**

average **decrease** per year

**± 2.51%**

standard deviation across years

Acreage %

**-2%**

Acres

**-497**

average **decrease** per year

**± 1.19%**

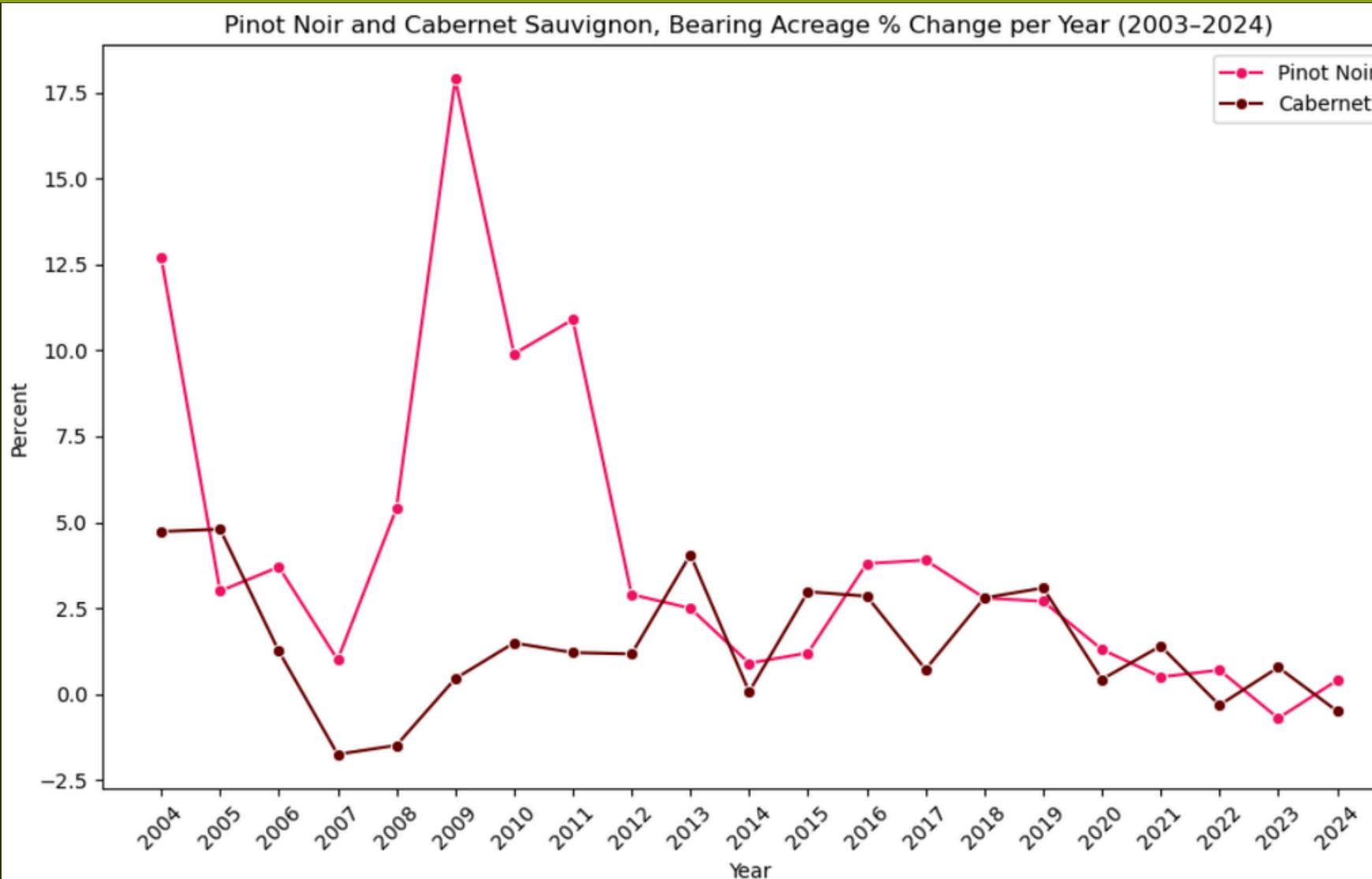
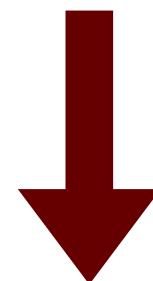
standard deviation across years

Acreage %

**-0.55%**



Chardonnay



Acres

**1124**

Acreage %

**1.44%**average **increase** per year**± 1.86%**

standard deviation across years

Acres

**1229**

Acreage %

**4.16%**average **increase** per year**± 4.76%**

standard deviation across years



Pinot Noir



**So, why did Pinot Noir's bearing acreage increase so drastically in 2009?**

# Insights



# Pinot Noir, Non-Bearing Acreage Changes

Pinot Noir, Non-Bearing Acreage per Year (2003-2024)



**2006 Increase**

**198%**

acreage percent **increase** from 2005

## Highly Unusual Acreage Trend in 2006

2005

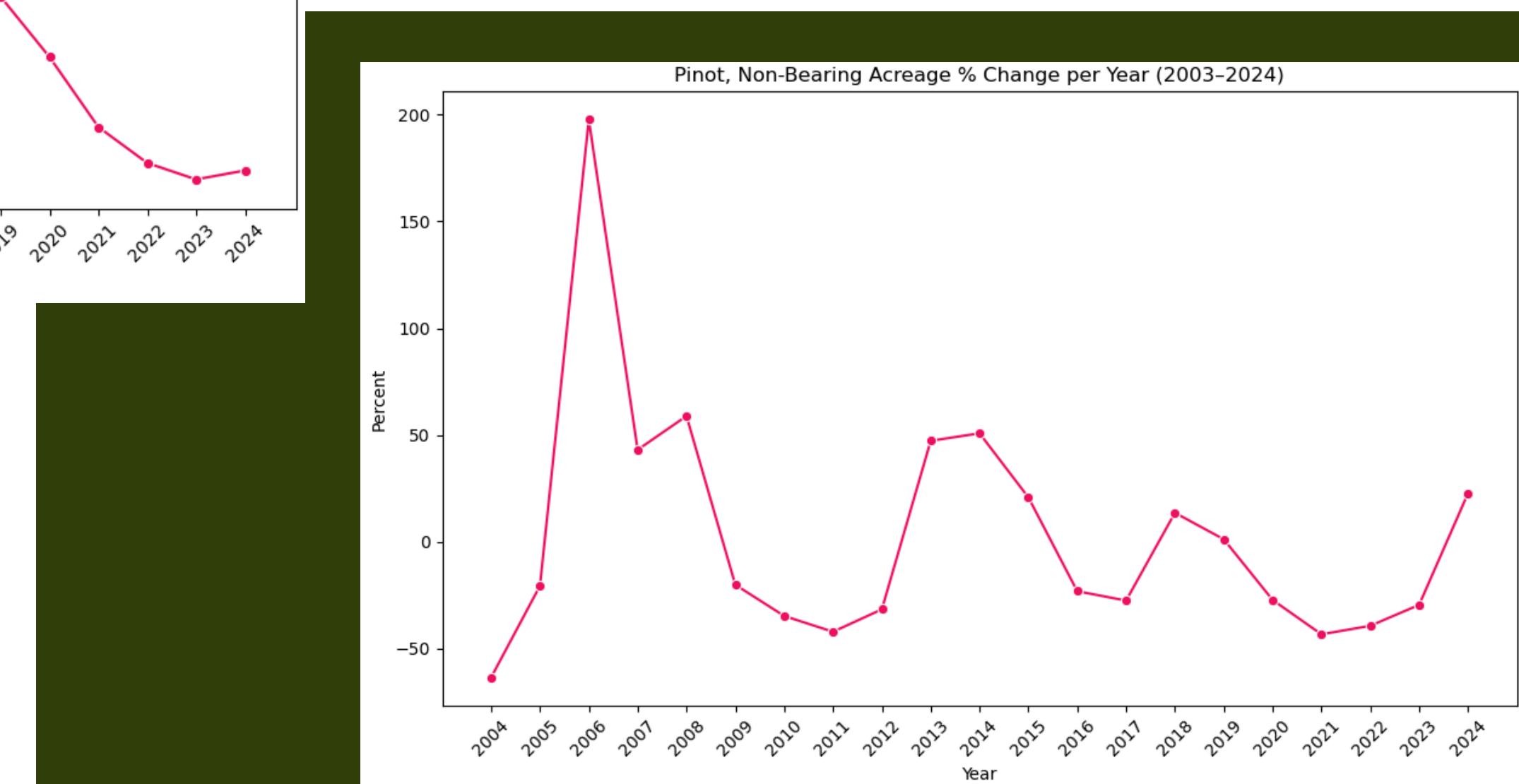
**1119**

absolute **increase** in acres

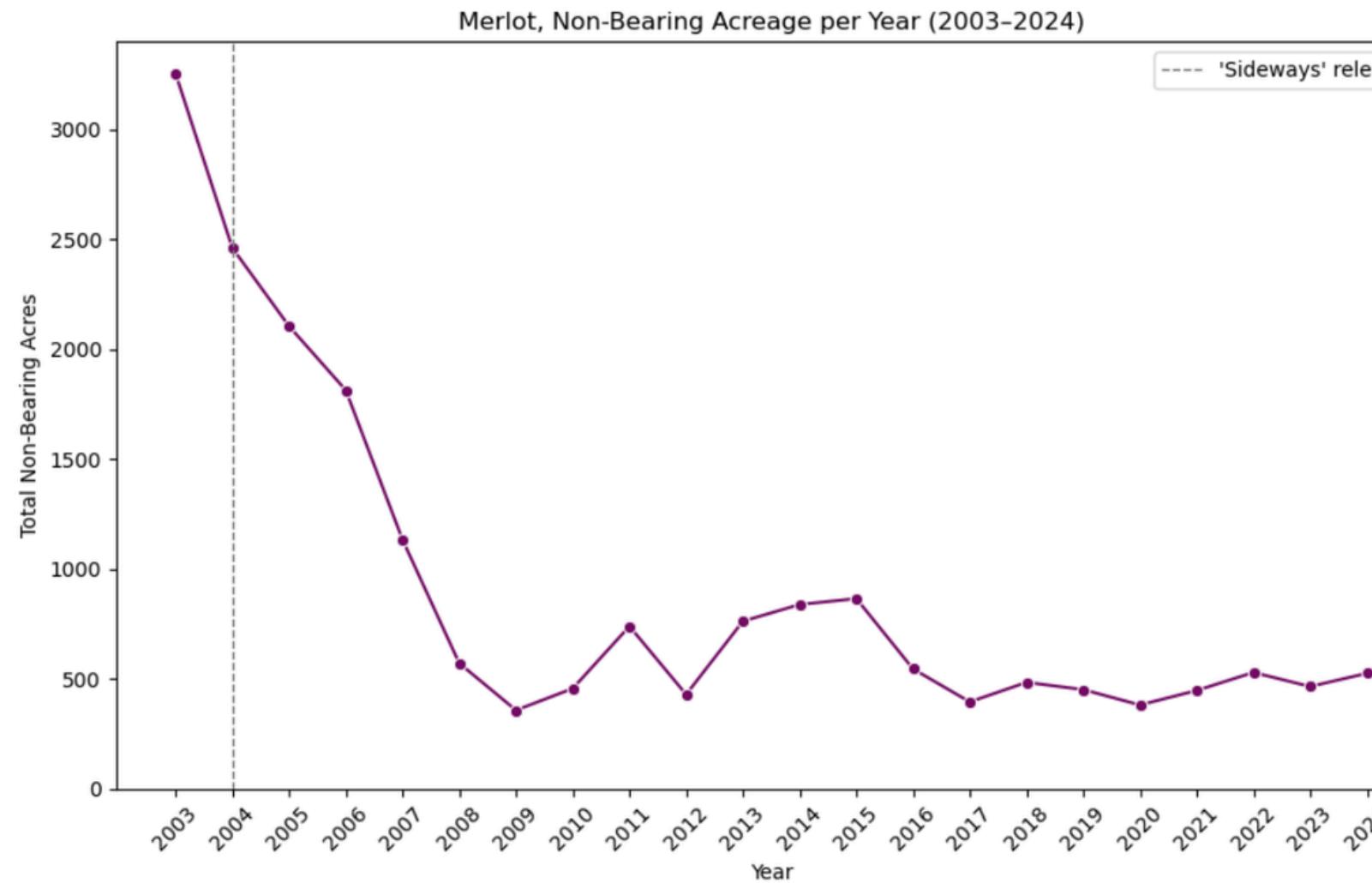
2006

**3331**

Pinot, Non-Bearing Acreage % Change per Year (2003-2024)



Pinot Noir, Non-Bearing Acreage Changes as Percent



**2006-2008 Decrease**

**-13.8%** | **-37.5%** | **-49.6%**

2006      2007      2008

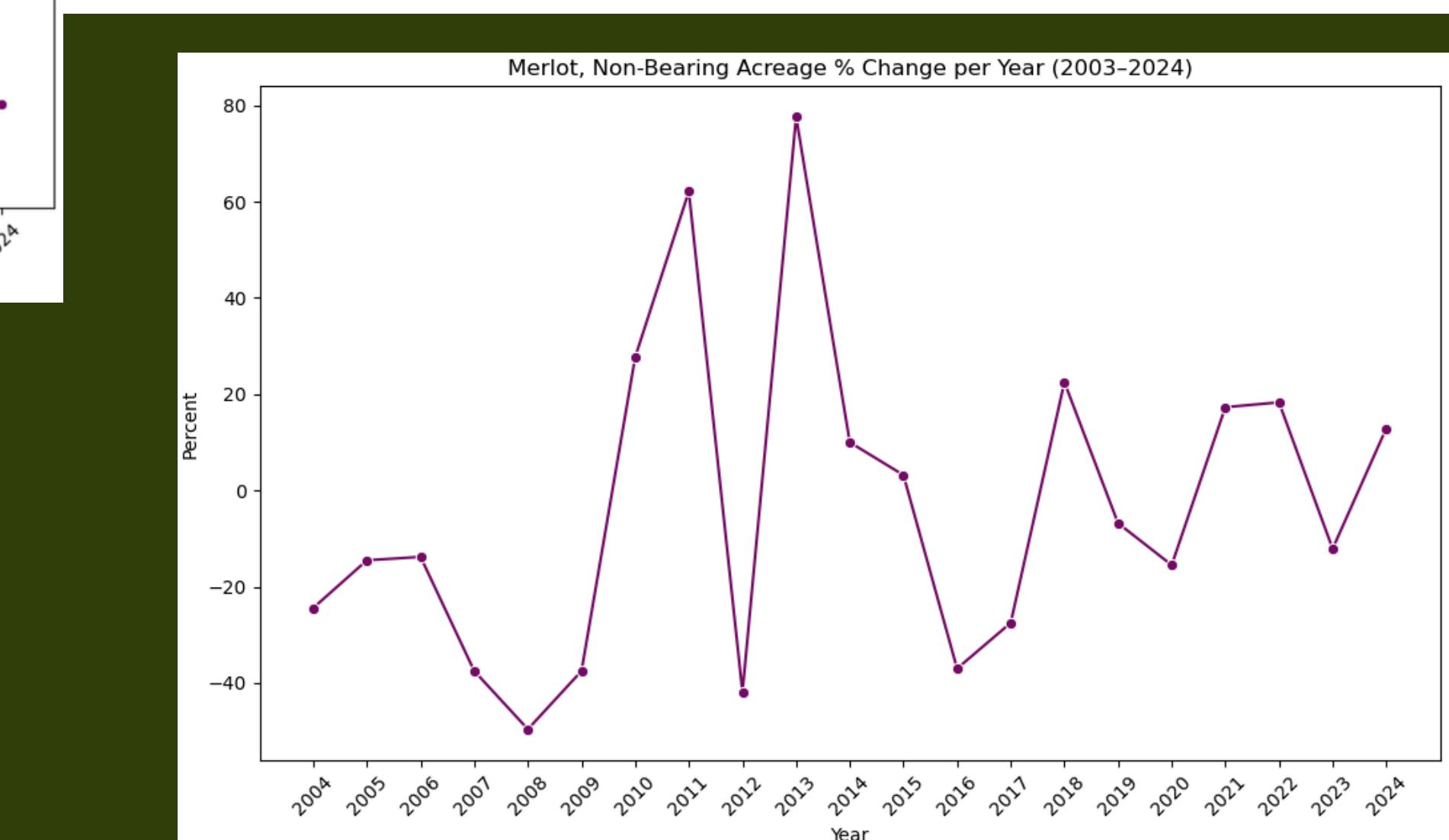
acreage percent **decrease** from 2006

## Unusual Acreage Trend in 2006-2008

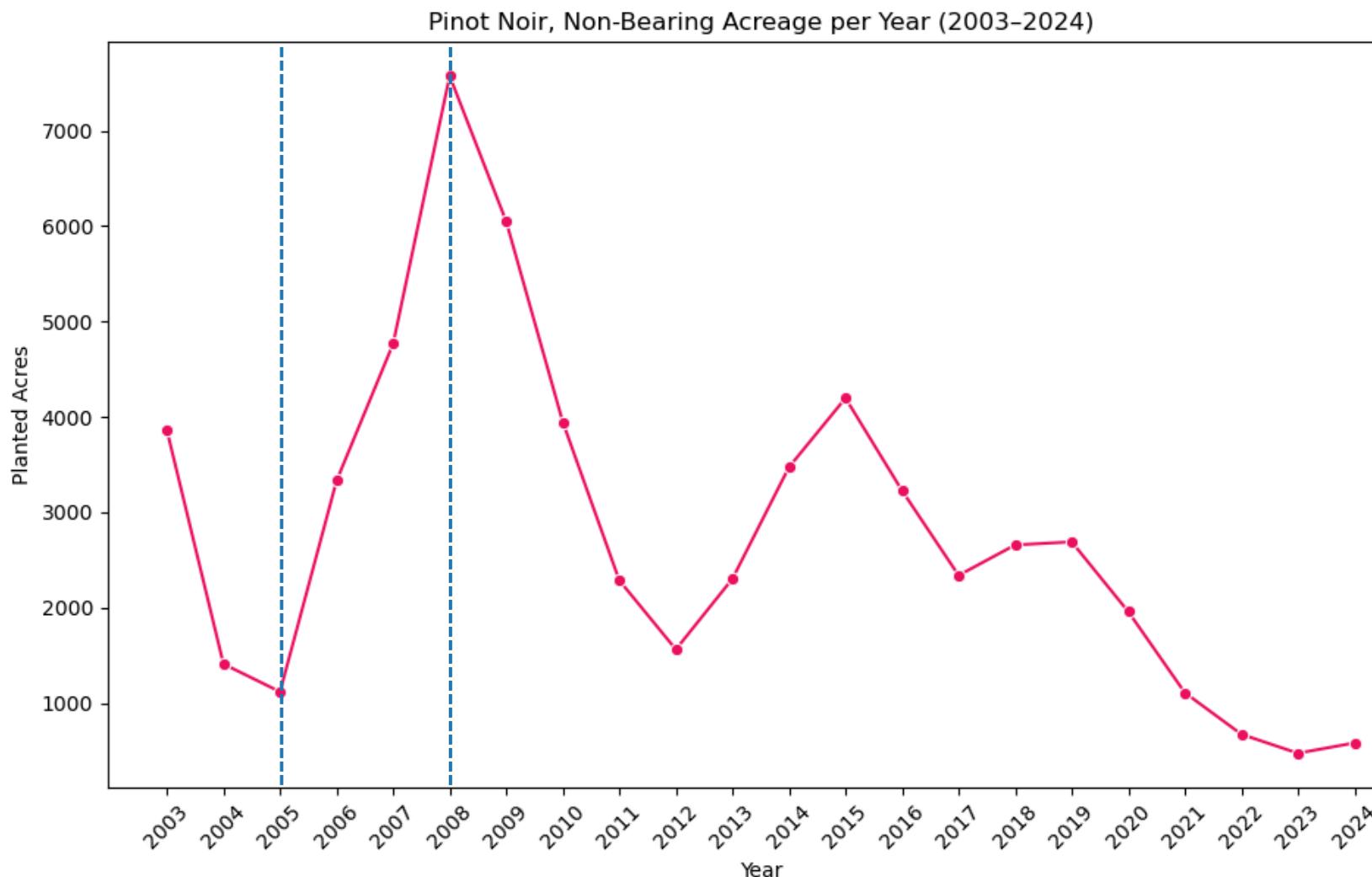
2006      2007      2008

**1813** | **1133** | **571**

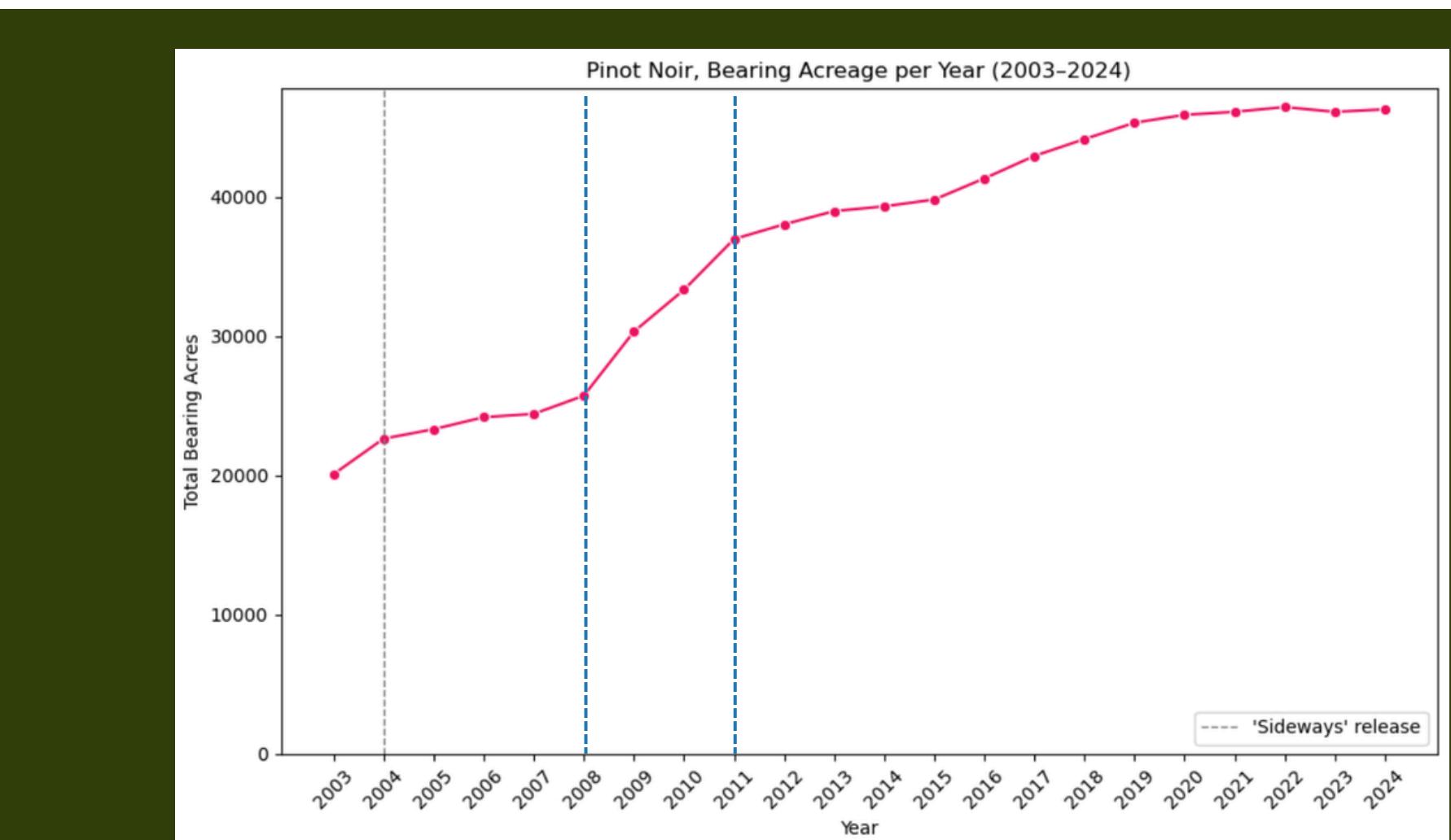
absolute **decrease** in acreage



## Pinot Noir Non-Bearing Acreage Increases 2005-2008



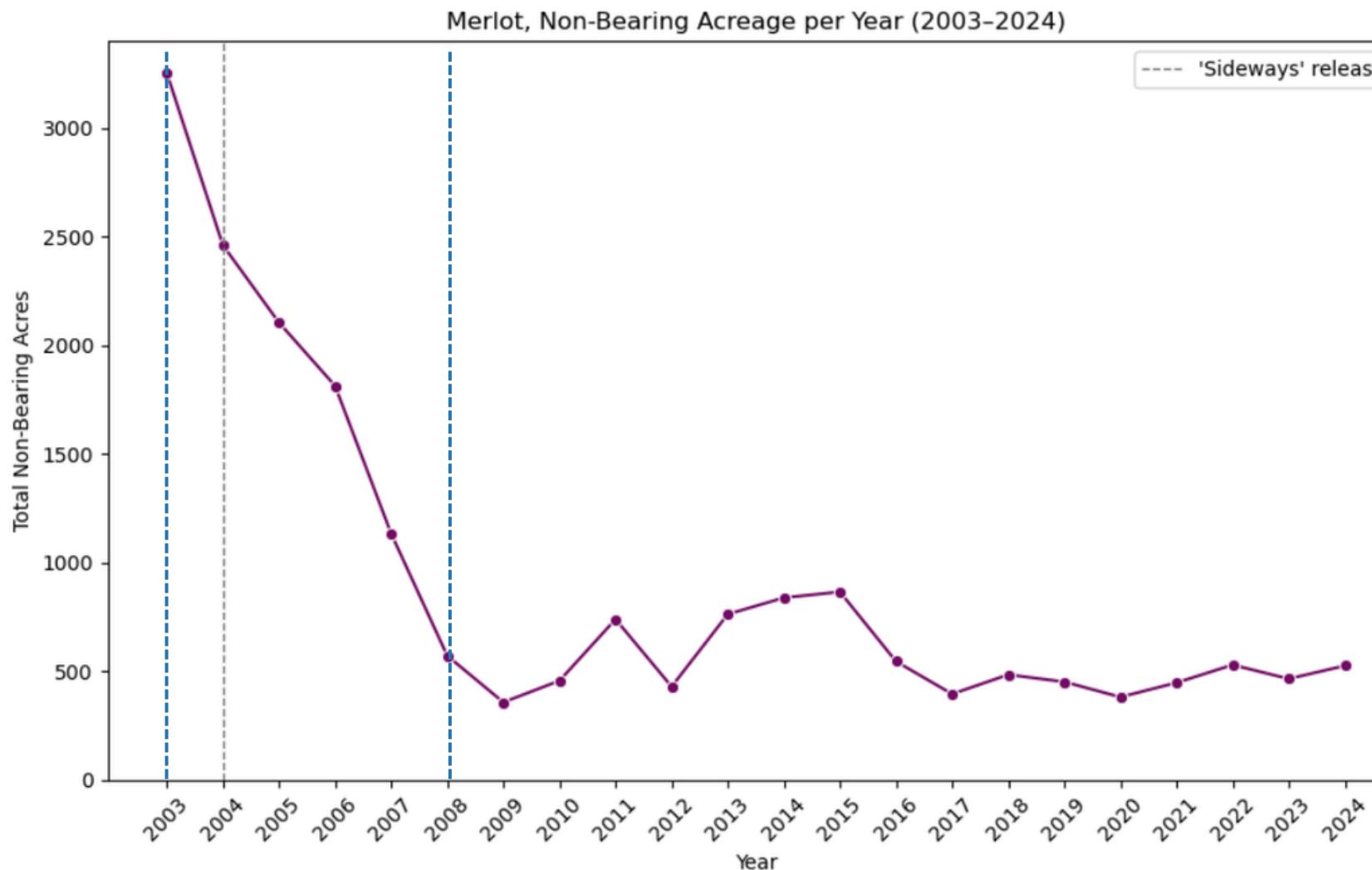
Starting at 2005, plantings increase dramatically



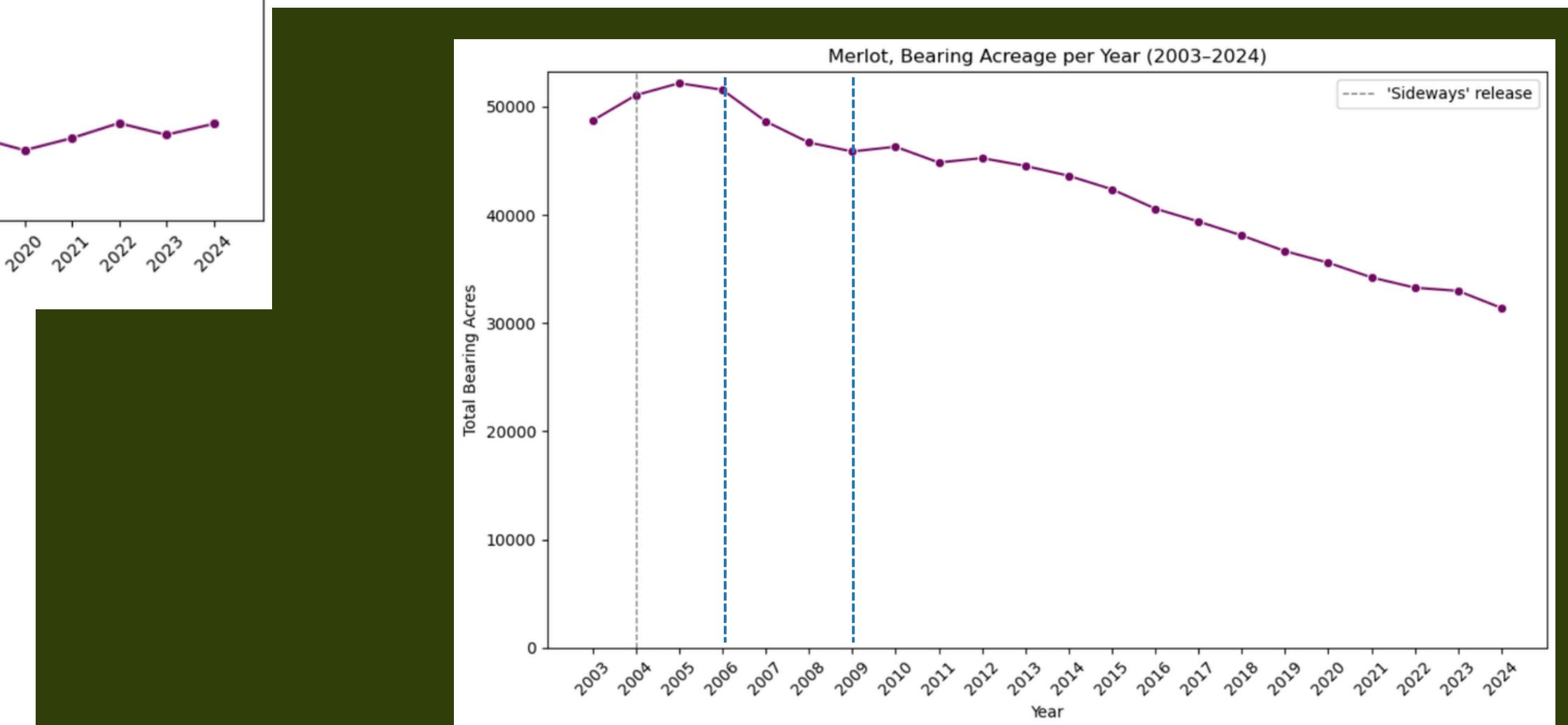
By 2008, previously planted vines are beginning to bear fruit

Pinot Noir Bearing Acreage Increases 2008-2011

## Merlot Non-Bearing Acreage Decreases 2003-2008



Starting at 2003, plantings decrease dramatically



By 2006, Bearing Acreage show a subtle, but notable dip

Pinot Noir Bearing Acreage Increases 2008-2011

**Are there any statistically relevant  
relationships in this data?**

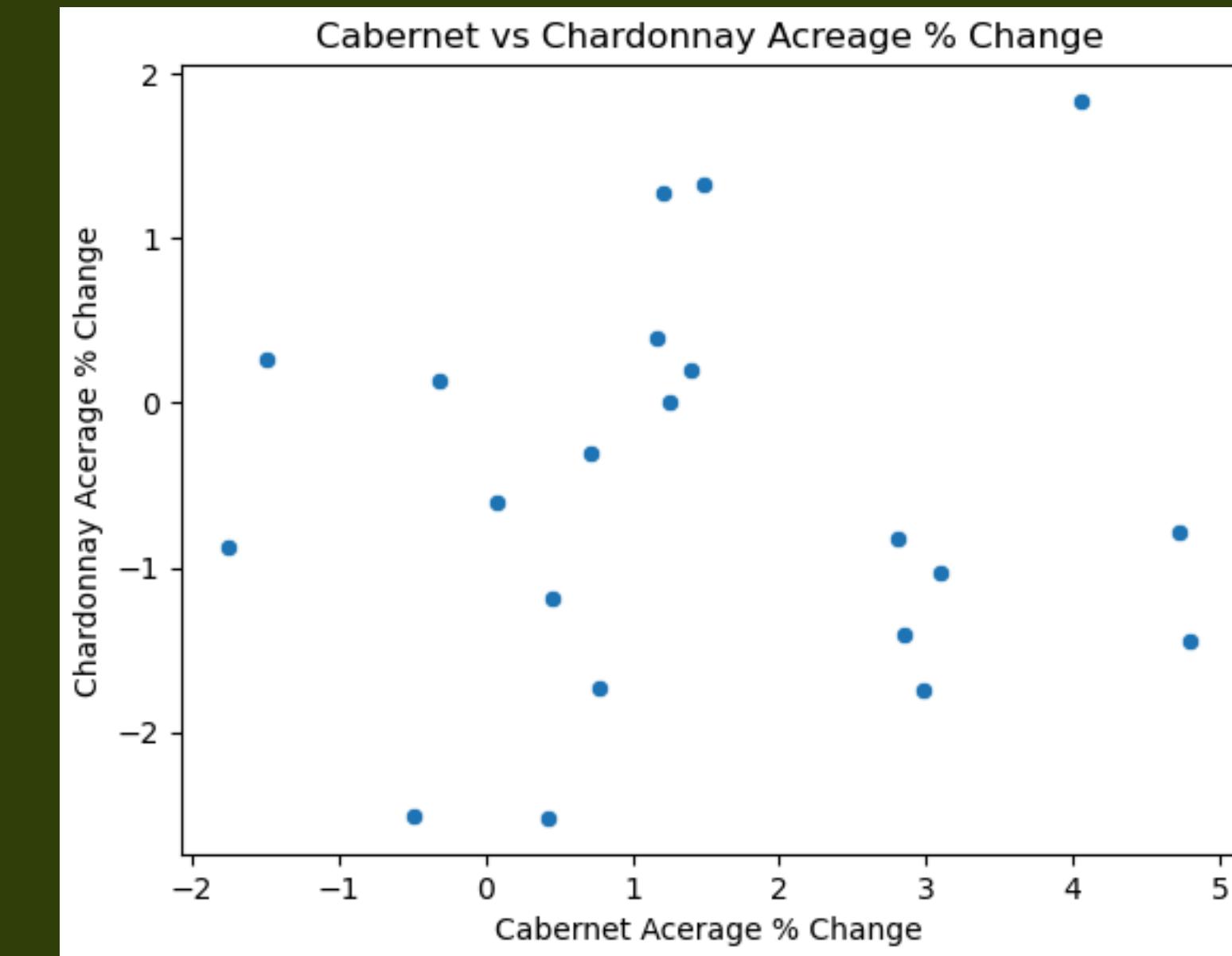
## Cabernet Sauvignon Bearing Acreage Increases...

### Pearson Correlation

0.05

very low correlation

There is little indication  
that where Cabernet  
**increases**, Chardonnay will  
**decrease** at the same time.



... and Chardonnay Bearing Acreage Decreases

## Pinot Noir Bearing Acreage Increases...

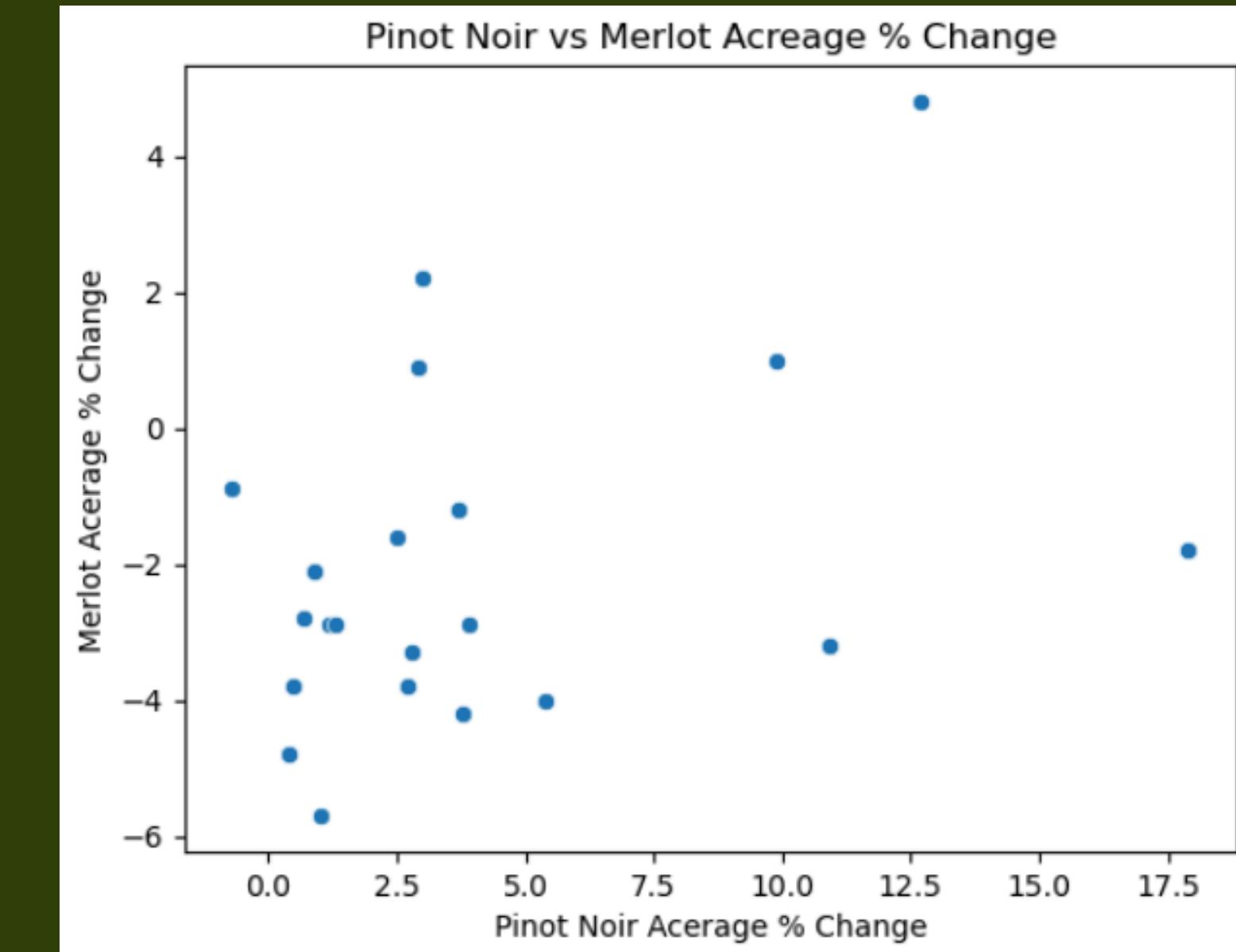
Used due to extreme outliers

### Spearman Correlation

0.27

low correlation

There is some indication  
that where Pinot Noir  
**increases**, Merlot will also  
**decrease** at the same time.



... and Merlot Bearing Acreage Decreases

# Conclusion



**Did the movie *Sideways* actually cause Pinot Noir to increase and Merlot to decease?**

**Did the movie *Sideways* actually cause Pinot Noir to increase and Merlot to decrease?**

Inconclusive - but it appears they are probably related!

# Conclusion

- 01 Pinot Increases,  
Merlot Decreases on  
Scatter and Line Plots
- 02 Google Searches  
Mirror Trends
- 03 Plantings for Pinot Noir  
Dramatically Increase  
post-Sideways
- 04 Plantings for Merlot  
Sharply Decline, though  
Bearing Acreage is  
more steady
- 05 Correlation Coefficient  
*Could Suggest a*  
Relationship with  
Different Methods



# Questions?



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