Hokkaido Wine and Global Warming

How Climate Change Is Opening a New Frontier for Japanese Wine

HOKKAIDO WINE × CLIMATE CHANGE

INTRODUCTION

Hokkaido's Growing Presence in Japanese Wine

18.5%

Hokkaido's share of
Japan's wine production

Japan's 3rd largest, after Yamanashi and Nagano

Japanese wine production once centered on Yamanashi and Nagano. In recent years, however, Hokkaido's cool climate has fueled its rapid rise, making it one of the country's essential wine regions.

- The number of wineries has surged from just 1 in 2000 to 75 in 2026
- No rainy season and low humidity mean little disease pressure on the vines
- Global warming is now expanding the cultivation of premium red wine varieties

TERROIR

The Cool-Climate Terroir Behind Hokkaido Wine

Hokkaido's cool climate and distinctive soils produce wines with a character that echoes Europe's great growing regions.



Cool Climate

April–October average temperatures stay below 15°C — comparable to Germany's Rheingau region.



Low Disease Risk

With no rainy season and low humidity, vines rarely suffer disease — ideal growing conditions.



Unique Winter Protection

In deep winter, vines are buried beneath snow — a distinctive method known as “yukishita maisetsu.”

REGIONS

Hokkaido's Three Major Wine Regions



Shiribeshi (Yoichi & Niki)

The heart of Pinot Noir growing — wineries have grown from 1 in 2000 to 15 today.



Sorachi

Home to distinctive wineries, led by the 447-hectare Tsurunuma Winery under Hokkaido Wine Co.



Tokachi

Founded in 1963 — a pioneering region known for municipally-led winemaking.

MAP

Hokkaido Wine Map — Regions and Notable Wineries



Shiribeshi

1. **Hokkaido Wine Co.**
   Otaru
2. **Domaine Takahiko**
   Yoichi
3. **NIKI Hills Winery**
   Niki

Sorachi

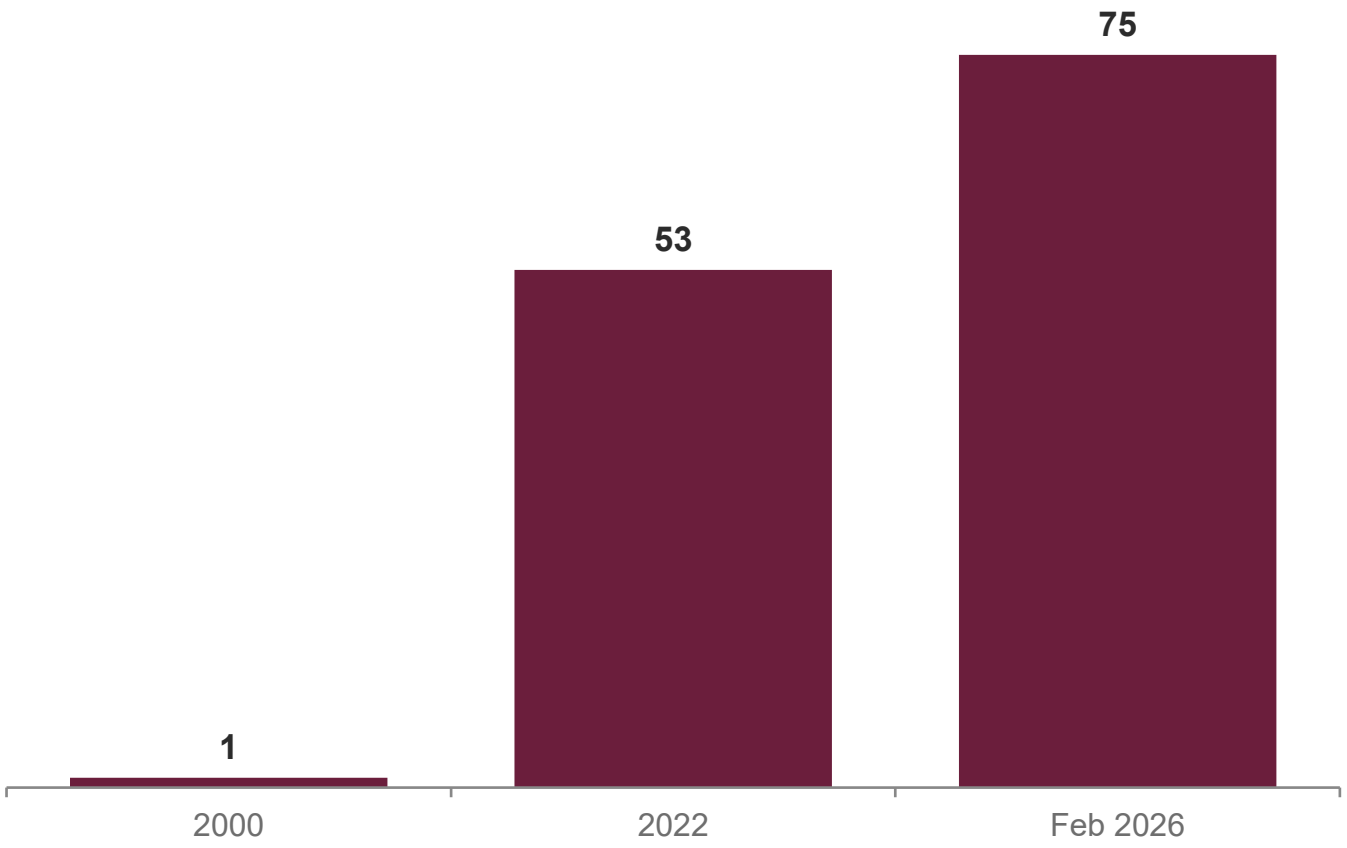
4. **Housui Winery**
   Iwamizawa
5. **Yamazaki Winery**
   Mikasa
6. **Tsurunuma Winery**
   Urausu

Tokachi / Other

7. **Tokachi Wine**
   Ikeda (Tokachi Grape & Wine Research Institute)
8. **Furano Wine**
   Furano (Central Hokkaido)

GROWTH

The Accelerating Rise in Winery Numbers



~75x

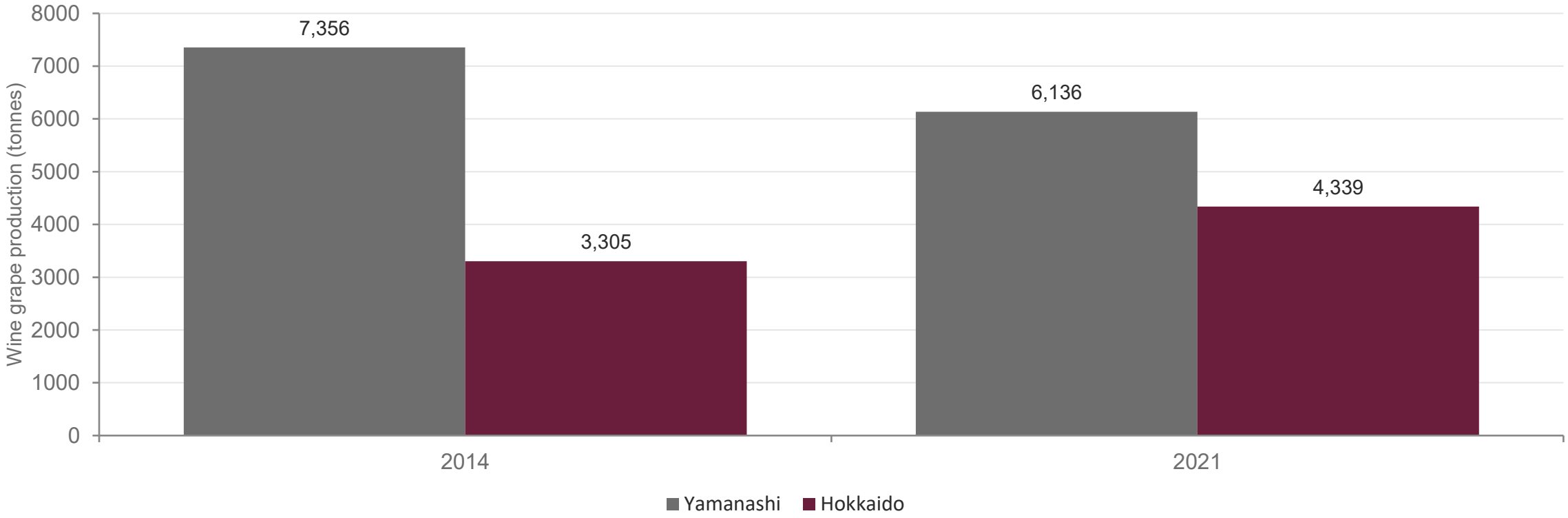
Growth in winery numbers
from 2000 to 2026

Roughly tripled in
the past 10 years alone

SHIFTING TERROIR

The Northward Shift — Yamanashi vs. Hokkaido

Global warming is quietly pushing Japan's wine grape regions northward. As Yamanashi's output declines, Hokkaido's keeps climbing.



THE TURNING POINT

1998: The Year the Climate Shifted

1998

A climate shift began around this year — Hokkaido's growing-season temperatures have risen steadily since



Research from NARO shows that since 1998, average April–October temperatures in Yoichi and Mikasa have consistently exceeded 14°C.

14–16°C

The average ideal temperature range for Pinot Noir regions worldwide

This warming is believed to stem from a La Niña-like sea surface temperature pattern linked to the Pacific Decadal Oscillation, which has prevailed since 1998 and lifted summer temperatures across northern Japan.

Still, winter survival and late-frost risk matter just as much as temperature when choosing a site.

PINOT NOIR

Why Pinot Noir?

Pinot Noir is a prized red variety that loves cool climates yet is notoriously hard to grow. Here's how Hokkaido's journey with it unfolded.

1978 –1985

Trial and Error

Surveys reported that “ripening was often late, with the fruit failing to mature in many years” — the challenges were clear.

2000s onward

Early Success Stories

As temperatures rose, successful Pinot Noir plantings and red winemaking began appearing across the region.

2010 –2020

Rapid Expansion

Planted area grew roughly 2.5x, from 16.8 to 40.1 hectares (see next slide).

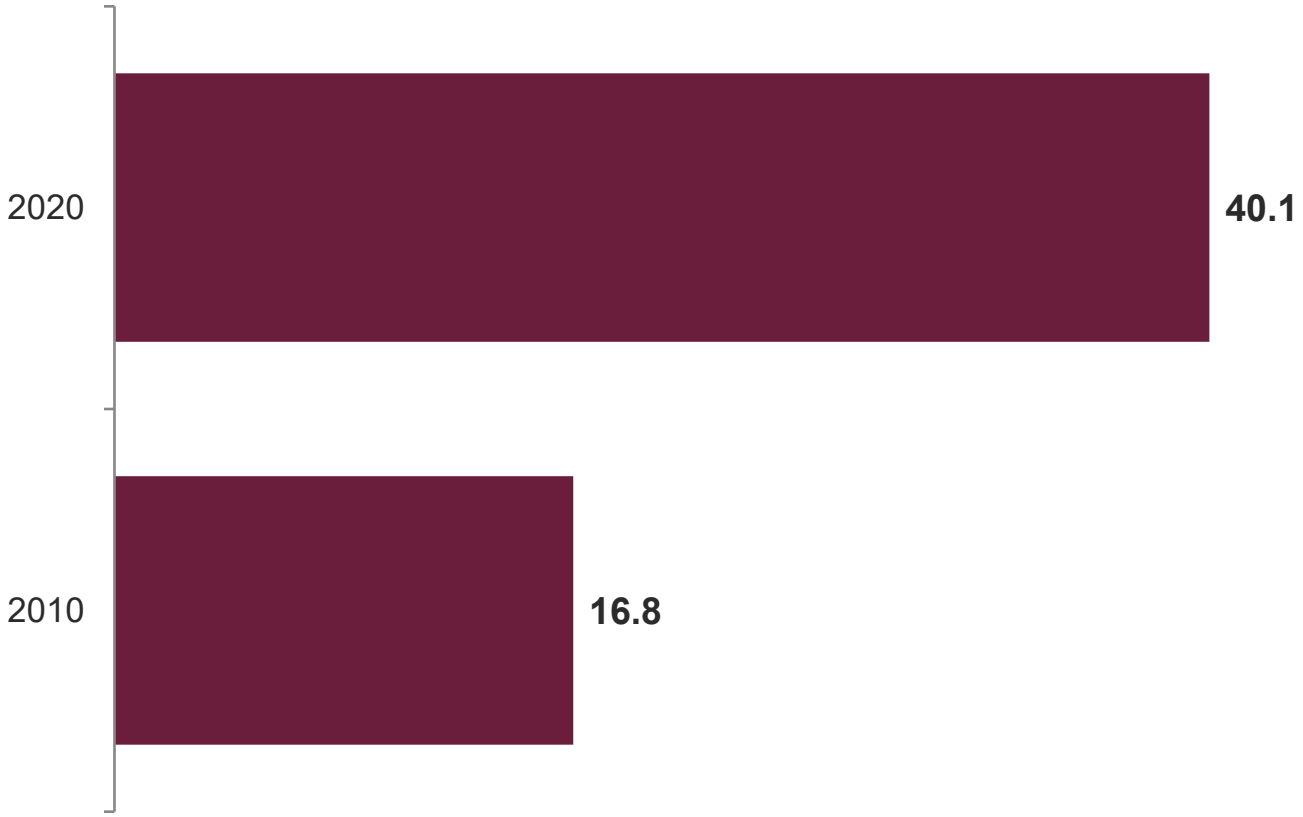
Today

A Signature Variety

Now recognized at home and abroad as one of Hokkaido's flagship premium red varieties.

EXPANSION

Pinot Noir Plantings Up 2.5x in a Decade



~2.5x

Centered on Shiribeshi, Pinot Noir plantings expanded from 16.8 hectares in 2010 to 40.1 hectares in 2020.

VARIETIES

From White to Red — A Shifting Variety Mix

Traditional Mainstay: White Varieties

The region built its reputation on white wine, capitalizing on its cool climate.

- Kerner
- Portland
- Bacchus
- Chardonnay

On the Rise: Red Varieties

Warming temperatures are driving growth in red wine grape cultivation and production.

- Zweigelt
- Rondo
- Pinot Noir

Born in Hokkaido: Yamasachi and Kiyomai, both crossbred with wild grape vines, have also emerged. Yamasachi is now officially registered with the International Organisation of Vine and Wine (OIV).

NORTHWARD EXPANSION

Suitable Land Keeps Expanding — Beyond Shiribeshi and Sorachi

Pinot Noir's ideal temperature zone isn't limited to Shiribeshi. Research shows it is spreading to other parts of Hokkaido too.

First

Shiribeshi (Yoichi & Mikasa)

Entered the ideal temperature zone earliest, after 1998 — the core of Hokkaido wine.

Growing

Kamikawa (Kamifurano)

Entered the zone after Shiribeshi, now drawing attention as new growing land.

Newest

Okhotsk (Kitami) & Sapporo-Fujino

Areas where a similar climate trend has been observed since 2010.

GLOBAL TREND

A Global Trend — Cool-Climate Regions on the Rise

The northward shift isn't unique to Hokkaido. Around the world, cool lands once dismissed as “unsuitable” are becoming new wine frontiers.



England

Riding the benefits of warming, England has risen to global acclaim as a producer of English sparkling wine.



Champagne (France)

Louis Roederer's Cristal, once released as a vintage only a few times per decade, was produced every year from 2002 to 2009.

THE OTHER SIDE

Meanwhile — Traditional Regions Face New Trials



California (USA)

The massive 2017 wildfires damaged roughly 40,000 hectares, centered on prestigious regions like Napa, Sonoma, and Mendocino.



Across Europe

Warming has pushed bud break earlier, raising the risk of severe damage from the late frosts that follow.



Alsace (France)

White varieties like Gewürztraminer are struggling to balance sugar levels with physiological ripeness, prompting some growers to consider switching varieties.

LIGHT AND SHADOW

Hokkaido Has Its Own Light and Shadow

Upside

- Premium red varieties like Pinot Noir now find a home here
- Successful red winemaking is spreading
- Both planted area and winery numbers are growing
- Attracting more attention at home and abroad

Downside

- High heat can cause poor fruit coloration
- Rising risk of sunburn on the fruit
- Shifting winter survival conditions
- Ongoing adaptation is needed as growth cycles shift

ADAPTATION

Adapting on the Ground to Protect the Region

Shading and Reflective Materials

Reflective sheeting and similar tools help prevent sunburn and poor coloration during hot spells.

Techniques like Girdling

Ring-barking (girdling) and related techniques are used to promote fruit coloration and ripening.

Weather-Data-Driven Support

NARO and others have developed support systems using gridded agrometeorological data to guide wine grape cultivation.

INDUSTRY SUPPORT

Public and Private Efforts Behind the Region's Growth

GI Hokkaido

The Geographical Indication (GI) system protects and enhances Hokkaido's brand value as a wine region.

Yamasachi's OIV Registration

Hokkaido's own grape variety has been registered with the International Organisation of Vine and Wine (OIV).

Hokkaido Wine Valley Initiative

Announced in April 2022, partnering with Hokkaido University to strengthen the industry's foundations.

Hokkaido Wine Platform

Established in April 2022 — a public-private body supporting talent development, management, and marketing.

SUMMARY

Toward a New Wine Region for the Age of Climate Change

Global warming is casting both light and shadow across the world's wine regions. While traditional areas grapple with heat, wildfires, and late frosts, Hokkaido has emerged as new, suitable ground — expanding the possibilities for Pinot Noir and other premium varieties.

At the same time, it faces new challenges of its own — sunburn, poor coloration, and shifting winter conditions — met with ongoing adaptations like shading materials, girdling, and weather-data-driven cultivation.

Through continued adaptation and ambition, Hokkaido remains Japanese wine's newest frontier.

References & Sources

- Weathernews, “Climate Change Is Also Affecting Wine Regions — Hokkaido Becomes Prime Land for Premium Pinot Noir” (November 2024)
- NARO (National Agriculture and Food Research Organization), “Climate Change Makes Pinot Noir Cultivation Possible in Hokkaido”
- Hokkaido Prefectural Government, Food Industry Promotion Division, “Promoting the Wine Industry”
- Académie du Vin, “Hokkaido Wine — A Momentum You Can't Look Away From”
- Climate Change Adaptation Platform (A-PLAT), “Climate Adaptation Efforts in Hokkaido Agriculture”
- Enoteca, “How Global Warming Is Affecting Wine”
- Winery locations: official websites and municipal pages for Hokkaido Wine Co., Domaine Takahiko, NIKI Hills Winery, Housui Winery, Yamazaki Winery, Tsurunuma Winery, Tokachi Wine, and Furano Wine

This deck was created for a general audience based on publicly available information.