

BALTIC CIDER TERROIR MAPPING OPPORTUNITY

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Interreg
Baltic Sea Region



Co-funded by
the European Union



RESILIENT ECONOMIES AND COMMUNITIES

BASCIL

TERROIR – THE BEGINNING



TERROIR IS REAL



“where a vine and resultant grapes grow will have a determinant over the resulting wine and that those aromas and flavours are unique to that place and cannot be identically replicated anywhere else”

CLIMATE

SOIL

TOPOGRAPHY

CLIMATE



SOIL



TOPOGRAPHY



SCALES OF TERROIR

MICRO – within a vineyard
or between adjacent
vineyards

SMALL – village to village

REGIONAL – Burgundy vs
Beaujolais



HUMAN FACTORS



VARIETAL SELECTION



VINEYARD MANAGEMENT

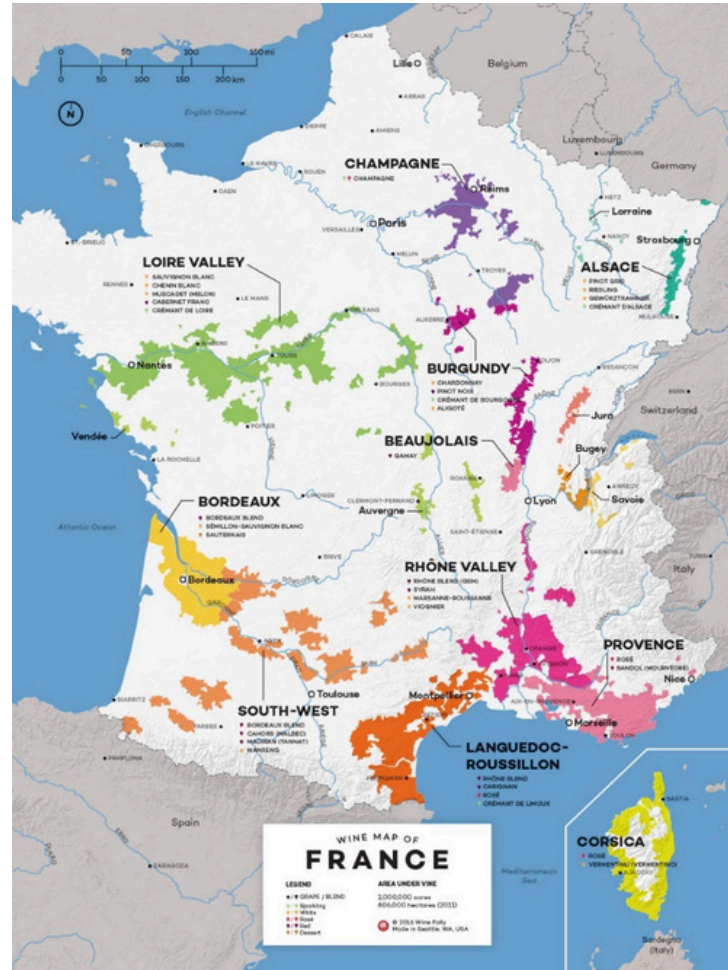


APPELLATION

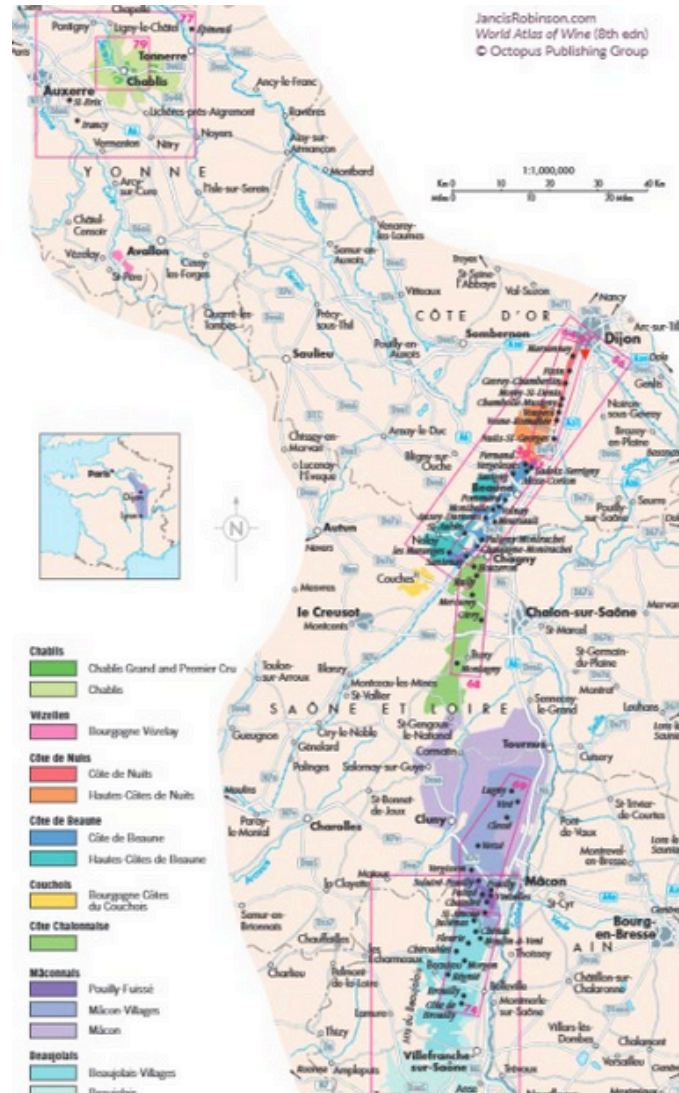
EXPRESSION OF TERROIR INTO CLASSIFICATION BASED ON GEOGRAPHY



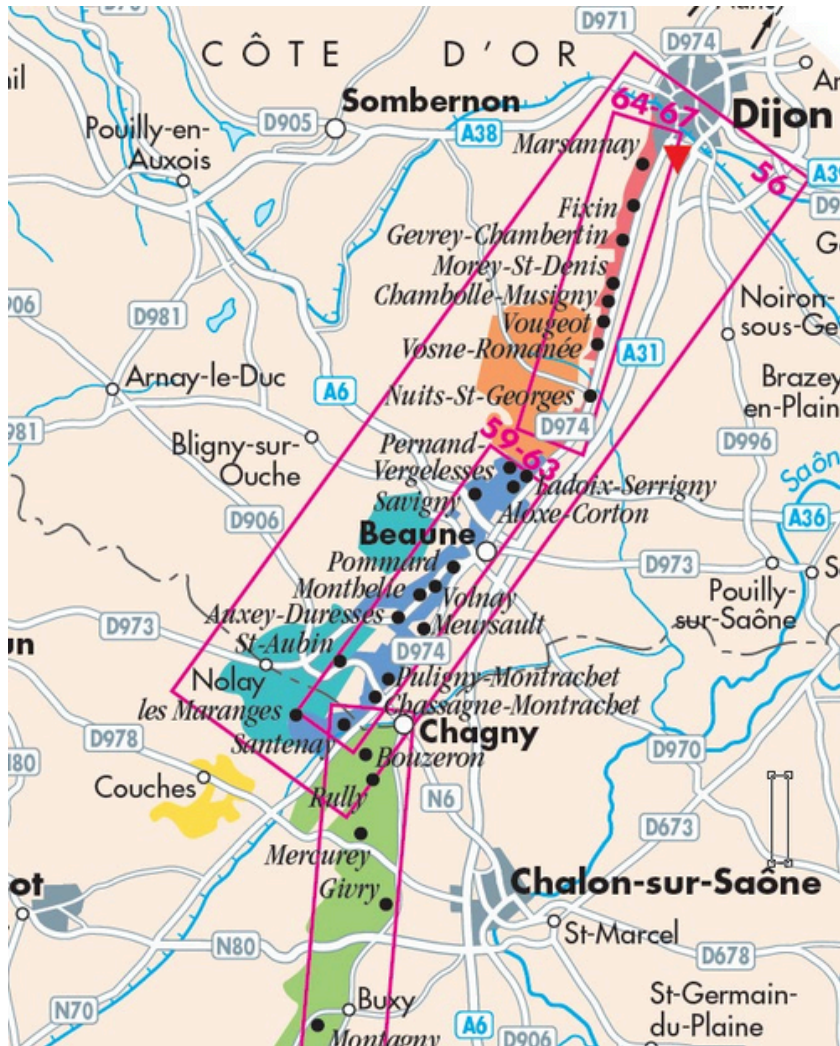
MAPPING APPELLATION



MAPPING APPELLATION



MAPPING APPELLATION



Vézélien

 Bourgogne Vézelay

Côte de Nuits

 Côte de Nuits

 Hautes-Côtes de Nuits

Côte de Beaune

 Côte de Beaune

 Hautes-Côtes de Beaune

Couchois

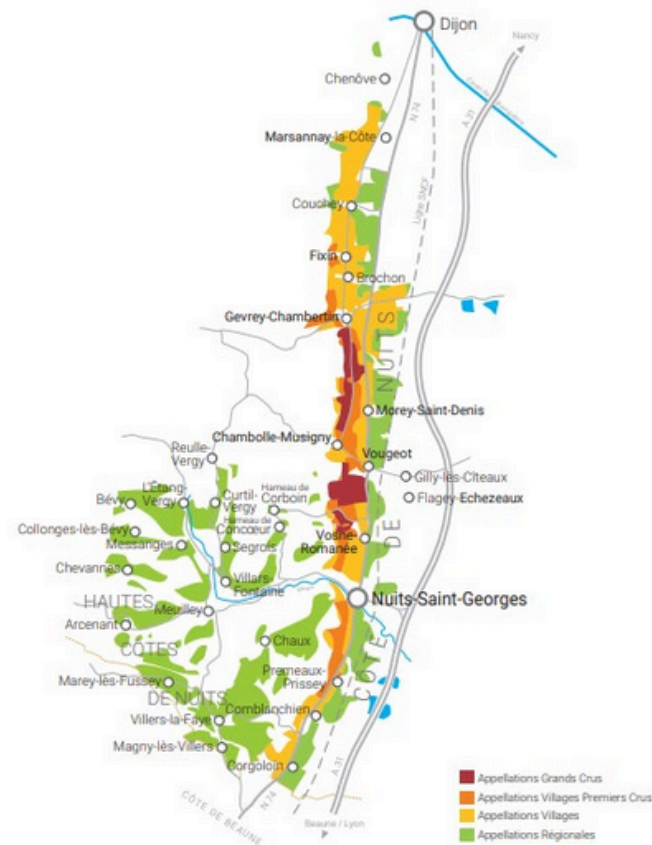
 Bourgogne Côtes du Couchois

Côte Chalonnaise



MAPPING APPELLATION

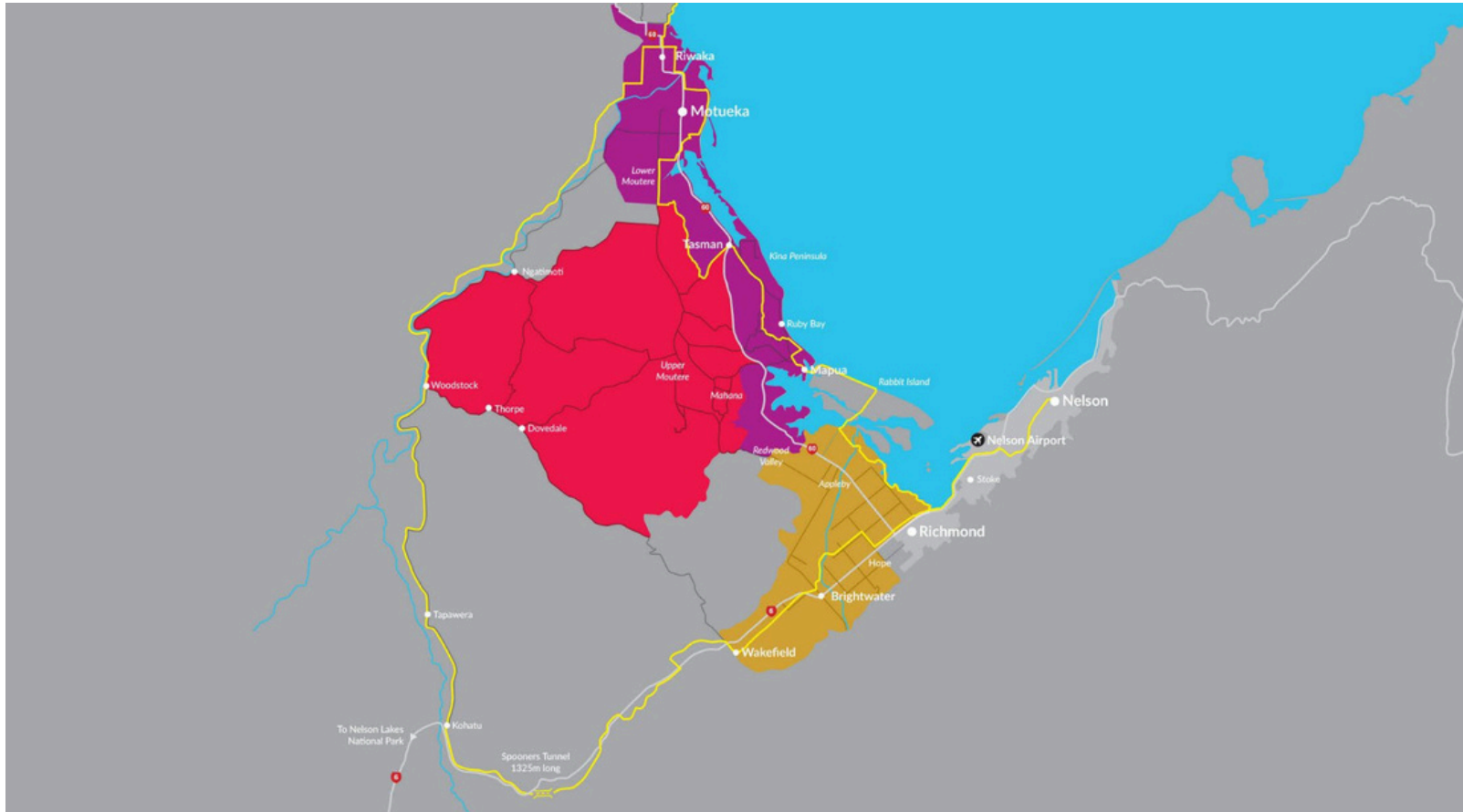
Côte de Nuits & Hautes Côtes de Nuits



MAPPING IN THE NEW WORLD



MAPPING IN THE NEW WORLD



NELSON – NEW ZEALAND

TERROIR & CIDER



SPAIN - ASTURIAS

Temperate, humid climate with moderate solar radiation in the summer period and the existence of rainy periods between June and October

Soil is generally slightly acidic in nature (pH 6.0-6.5) with a high content of organic matter and a tendency to have fairly balanced contents of nitrogen, phosphorus, magnesium and potassium



FRANCE – PAYS D'AUGE

The mild climate of Pays d'Auge and its bocage relief offer a choice setting for the first designation of origin obtained by a cider.

In this territory, the oceanic climate brings a regular rainfall of 700 to 850 mm per year and a low thermal amplitude. Pays d'Auge cider orchards develop on clay valleys, mainly of flint and chalk clay, with a shallow depth of soil.



UK WESTERN COUNTIES

Temperate and mild weather

Rich clay or sandy soils over red sandstone

Gentle topography



NOT ALL LAND IS CREATED EQUAL



ANECDOTAL TERROIR EVIDENCE



CIDER TERROIR RESEARCH



EARLY DAYS!

Terroir HAS been proven to exist in cider as with wine

BUT not all evidence points towards terroir being the key orchard-based differentiator in analytical and sensory measurements in different ciders.

Other orchard-based factors:

- MICROBIAL TERROIR**
- VARIETY**
- VINTAGE**

MADEIRA

A decreased mean annual precipitation was found to correlate with an increase in concentrations of esters, alcohols, acids and volatile phenols



USA

**RESEARCH HAS SHOWN THAT
APPLES GROWN IN DIFFERENT
LOCATIONS PRODUCE CIDERS WITH
VARYING LEVELS OF TA AND TANNIN
LEVELS**

**SOME RESEARCH LINKS THIS MORE
TO TERROIR**

**SOME RESEARCH LINKS THIS MORE
TO APPLE VARIETAL AND VINTAGE
VARIATION**



AUSTRALIA



AUSTRALIA

The intensity of sensory attributes has been found to vary significantly between regions – TERROIR IS REAL

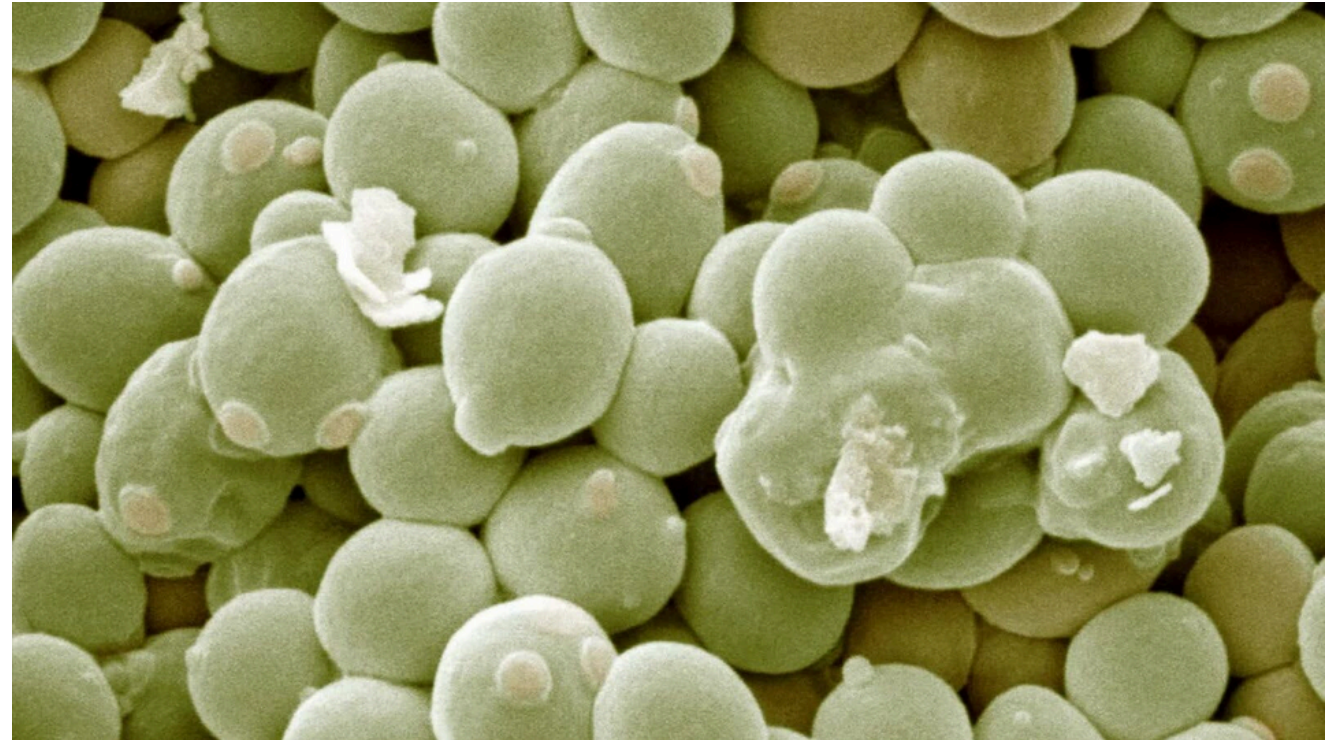
But some research looked at only 1 apple varietal and only 1 year

Other research showed differences in total acidity through different climates over several years

- no mention of soil or topography differentiation**
- no great correlation between location and total phenolic composition**

MICROBIAL TERROIR

For spontaneously fermented ciders the terroir of the cider making facility, rather than the orchard, will have a huge impact over the sensory profile



VINTAGE VARIATIONS



VARIETAL SELECTION



TERROIR & WINE PRICE

Terroir / Appellation (Old World) and vineyard management (New World) largely dictate higher price points

Cider does not have same land-based value



FINE CIDER & PRICE

Cider making techniques (minimal intervention, keeving, pet nat, traditional method, barrel-aged etc) and story telling (rare apple or long lost orchard) largely drive price in 'fine' cider



CIDER MAKER INFLUENCE



TERROIR FOR CIDER AS A PARTNERSHIP



THE SITE

CLIMATE

SOIL

TOPOGRAPHY



THE GROWER

VARIETAL SELECTION

ROOTSTOCK

PRUNING

SPRAYS

FERTILISERS

THINNING

IRRIGATION

FRUIT GRADING



THE MAKER

STILL OR SPARKLING

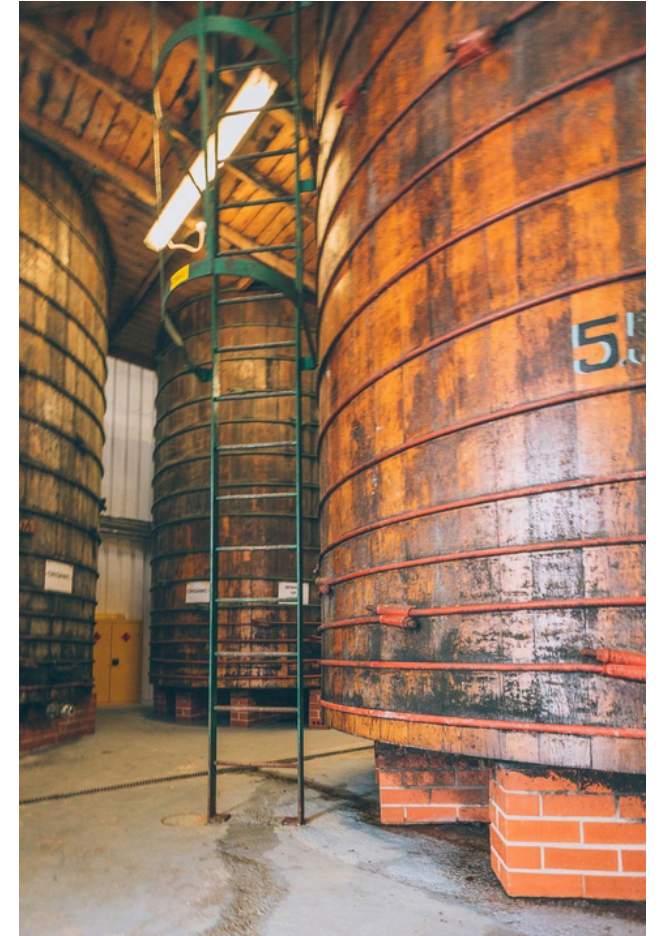
DRY OR SWEET

STEEL OR OAK

YOUNG OR AGED

100% JUICE OR DILUTED

PURE APPLE OR FLAVOURED



TYPICITY IN WINE

Typicity is the culmination of the ‘natural’ terroir, in combination with cultural heritage – vineyard management, grape selection and production methodology - to create established regional styles of wine with identifiable sensory characteristics.

This is how a Sommelier knows where a wine comes from by aroma and flavour alone

TRADITIONAL REGIONAL TYPICITY

CHABLIS

- Chardonnay
- No oak
- Minerally, citrussy characters



PRODUCTION TYPICITY

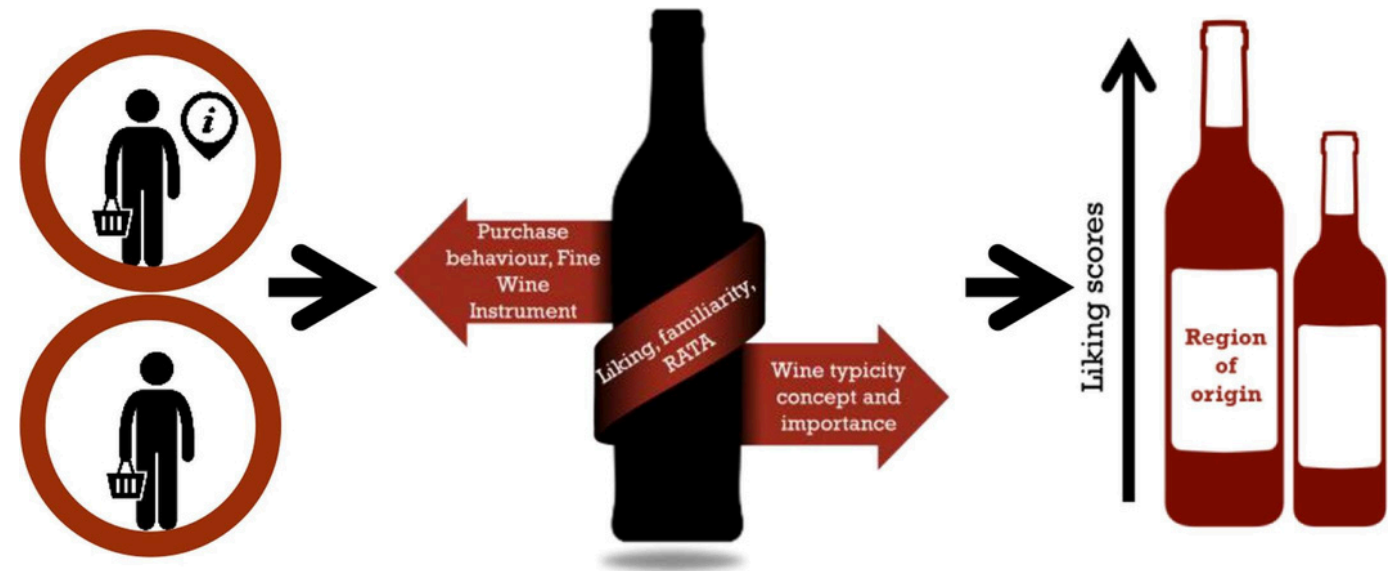
CHAMPAGNE

- Pinot Noir, Pinot Meunier & Chardonnay
- Traditional Method



TYPICITY & MARKETING

Research has shown that regional typicity for old world wines is more important for purchasing decisions than varietal – hence Chablis not Chardonnay



VARIETAL TYPICITY

Although influenced by terroir and production method, the grape varietal will have the same fingerprint

Eg Sauvignon Blanc

- Marlborough NZ

- Sancerre FR

- Sauternes FR



NEW WORLD VARIETAL FOCUS

There is no appellation in the New World, giving winemakers the freedom to produce many styles

Without control over production method or regional typicity, **VARIETAL** has become the key typicity



TYPICITY & CIDER



**CAN A POMMELIER SMELL AND TASTE A CIDER AND
SAY WHERE IN THE WORLD IT HAS COME FROM??**

HOW IMPORTANT IS APPELLATION?

PAYS D'AUGE AOC

BITTER, BITTERSWEET, ACID AND SWEET APPLES

KEEVING METHODOLOGY – NATURALLY SWEET

BRUT – DOUX

CONTROL OVER VARIETIES USED & MAX/MIN
LEVELS OF ACID, SUGAR AND CO2



ASTURIAS SIDRA NATURAL AOP

ACID, SWEET & BITTER APPLES

SPONTANEOUS FERMENTATION

STILL, DRY, NO FILTRATION

1G/L – 2G/L VOLATILE ACIDITY

**CONTROL OVER VARIETIES USED & MAX/MIN
LEVELS OF ACID, SUGAR AND CO₂**



BUT SEVERAL QUESTIONS...

IS IT TERROIR THAT IS DEFINING FACTOR?

OR IS IT UNIQUE APPLE VARIETIES?

OR IS IT UNIQUE PRODUCTION METHODS?

**COULD A KEEVED CIDER FROM THE UK BE
DISTINGUISHED FROM PAYS D'AUGE?**

**COULD A 'SOUR CIDER' FROM THE USA BE
DISTINGUISHED FROM A SIDRA NATURAL?**

WESTERN COUNTIES TYPICITY

BITTERSWEET & BITTERSARP APPLES

VARIETALS NOT LOCAL TO REGION ANY MORE

VERY DRY TO VERY SWEET

STILL OR CARBONATED

WILD FERMENTATION OR CULTURED YEAST

100% JUICE TO 35% JUICE

NO APPELLATION!



NORWAY TYPICITY

**NOFIMA RESEARCH FROM
2022 CONCLUDED THAT
VARIETAL SELECTION WAS
MORE IMPORTANT IN
DETERMINING AROMA AND
FLAVOUR THAN LOCATION**



SO, ROLE OF CIDER TYPICITY?



**NOT SO EASY TO HAVE CIDER TYPICITY UNLESS
UNDER APPELLATION CONTROL**

**EVEN THEN, APPLE VARIETAL SELECTION,
PRODUCTION METHOD, MICROBIOLOGICAL
TERROIR AND VINTAGE CHARACTERS WILL HUGELY
INFLUENCE FINAL LIQUID**

WHAT CAN THE BALTICS LEARN?



TERROIR RESEARCH SO FAR



Interreg



Co-funded by
the European Union

Estonia – Latvia

**Knowledge-driven Baltic Cider Production
and Branding for Growth and
Competitiveness of SMEs**

Project ID: EE-LV00145

Baltic Cider

**Brief overview of results of soil analysis and
data relations to juice yield of selected apple
cultivars and it's composition**



INSTITUTE OF
HORTI
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3rd PROJECT PARTNER MEETING

April, 3, 2025, online



CIDER MAKER SURVEY- LAND



Mostly flat with some gentle slope

Mostly semi-dwarf rootstocks with some using trees on M25

Age of orchard- mostly less than 12ys

1/3 of participants add glyphosate under tree - no Estonians

Latvia mostly sandy clay - more sandy loam or loam in Estonia

Growing season start consistent across all makers

3 of 4 Estonians stated some lack of moisture. Half of Latvians said sometimes short.



CIDER MAKER SURVEY- VARIETIES

**Antonowka and Auksis
common across all sites.
Pepins also common in
Latvia.**

**Use of wild apples or tannin
apples for tannin by some
(not all) makers.**



CIDER MAKER SURVEY- PROCESS

A mixture of field blends and cellar blends –
some undertake both

A mix of spontaneous fermentation and cultured
yeast

Fermentation weeks to years depending on
producer and product. Related more to volume
of production than geography

Mix of products with force carbonation and
natural carbonation and some do both

Mostly makers do full range of dry to sweet



IS THERE A BALTIC TERROIR OR TYPICITY?



Too early to tell the impact of natural terroir on sensory characters, but as seen from global research it WILL have an impact

It will take a lot more research to understand role of climate, soil, topography varietal, vintage and production techniques in determining key analytical and sensory characters

At this stage there is no clearly identifiable Baltic typicity, or typicity between different areas within Baltics

- No appellation control**
- Not enough consistency across makers of apple varietal selection, production method or style**

MARKETING THE BALTIC CIDER STORY



So, what can the Baltics do? GET STORY TELLING!

How to differentiate Baltic Cider from Spain, France, UK, Norway, Italy etc:

- Follow the lead from Asturias and Pays d'Auges: talk about unique climate – cold winter and hot summer – why this is unique for apple growing and what impact it has on the cider**
- Follow the lead from the New World of wine: talk about varietal typicity – celebrate Auksis, Antonowka and Pepins**

MARKETING THE BALTIC CIDER STORY



How to differentiate regions/areas within Baltics? Use simple and understandable mapping and language

Zones or clusters of cider makers

- **North Estonia / Borderlands / South Latvia**
- **Coastal vs Inland**
- **Areas of very distinct soil or topography (if any)**

MARKETING THE BALTIC CIDER STORY



Celebrate your makers:

- **Champion and educate different techniques – spontaneous fermentation, traditional method**

Celebrate cider as a sustainable drink:

- **Low co2 use in production**
- **Carbon sequestration in orchards**
- **Orchard biodiversity**

THANK YOU & WASSAIL!

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