What might this mean for the production of premium wine styles?

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Vintage 2030 and beyond

Producing quality wines in warmer times

Wednesday 19th June 2013

The University of Melbourne

2011….FINLAND is officially approved as a winemaking country within the European Union…….

IF YOUR REGION GETS HOTTER……IT MAY NOT BE ALL BAD….

More reliable climate in some regions—better harvests

Opportunities for new styles and varieties

ON THE OTHER HAND……

Earlier ripening
Compressed harvest periods
Increased need for irrigation
Earlier flowering—increased frost risk
More/different pests and diseases

IF YOUR REGION GETS HOTTER, YOU MAY ENCOUNTER……

- Lower total acidity, especially malic acid
- Lack of nitrogen in musts
- Fewer flavour precursors
- High potassium levels at pressing
- Higher sugar levels in must and juice

EFFECTS of WATER STRESS and LOW NITROGEN

- In whites
  Water stress can negatively affect aroma potential esp. in S. Blanc.

  Low levels of phenolics and high levels of glutathione important for preserving volatile thiols during processing.

  Atypical ageing characters (ATA)—waxy, dish cloth, furniture polish—due to water stress.

WHAT IS TO BE DONE?

1. VINE MANAGEMENT

2. PRODUCTION

3. TECHNOLOGY

4. MARKETING

VINE MANAGEMENT

- Coping with increased vegetative growth
- Coping with increased disease pressure
- Canopy management to reduce sunburn, raisining and heat stress

PRODUCTION

- Different varieties
  Suited to drier, warmer growing conditions:
  Italy—Aglianico, Vermentino
  Portugal—Touriga Nacional
  Greece—Assyrtiko, Xinomavro
  Turkey—Emir, Boğazkere, Öküzgözü

- Different styles
  Sardinian vs Ligurian and Australian Vermentino

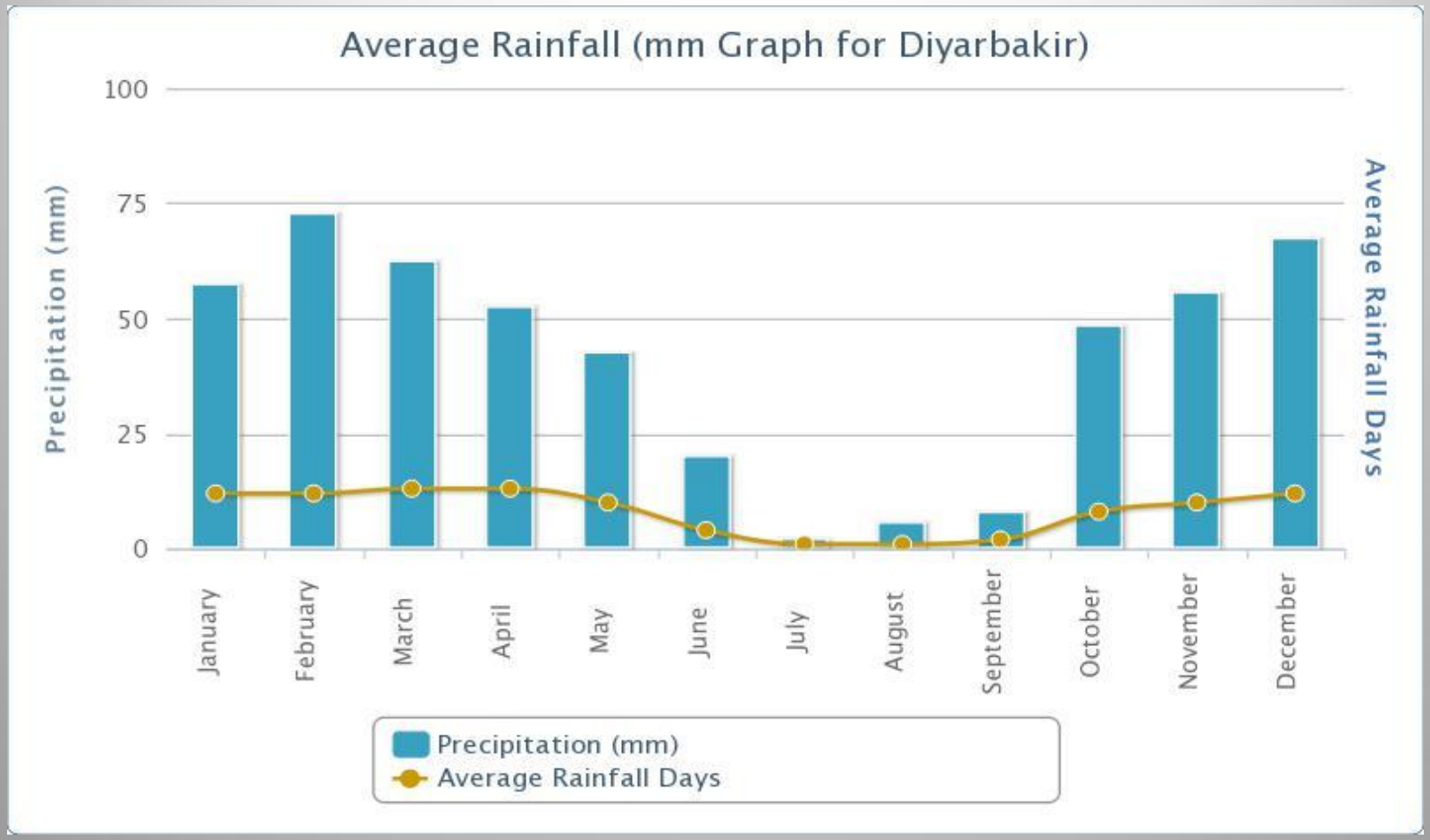
Emir vineyard in Cappadocia, Central Anatolia, Turkey

Bogazkere vineyard near Diyarbakir, Eastern Anatolia, Turkey

Thanks to Daniel O’Donnell, winemaker, Kayra Wines, Şarköy, Turkey

Weather data for Diyarbakir

	January	February	March	April	May	June	July	August	September	October	November	December
Max Temp.	16.5	21.3	28.3	35.3	38.1	42.0	45.0	44.8	42.0	35.7	27.2	22.5
Min. Temp.	-22.1	-21.0	-14.0	-6.0	0.8	6.0	11.0	13.8	5.2	-1.2	-8.8	-23.4
Average Temp.	1.8	3.5	8.5	13.8	19.3	26.3	31.2	30.3	24.8	17.2	9.2	4.0



This week's weather forecast (mostly sunny, no rain predicted)

Tuesday	Wednesday	Thursday	Friday	Saturday
21/34	20/34	20/35	21/35	20/36

Different styles—Liguria vs Sardinia

DIFFERENT STYLES

Sardinian vs Ligurian Vermentino

Sardinian versions commonly have pH greater than 3.50 and total acidity less than 6.0 (more likely to be around 5.4-5.5 g/l). Alcohols over 13.0%.

Ligurian versions are more “familiar” to Australian winemakers. Australian alcohols 11.0-12.5%

High pH winemaking

- Riper grapes and more stress (hotter growing conditions) probably means higher pH.
- Your choices:
  Add acid to adjust to a more conventional pH and T/A balance. What are the implications?

  Operate with higher pH and lower T/A. What are the implications?

High pH and high T/A together is common now in Australia—even more of a problem.

High pH wines

- Likely to age more rapidly, even prematurely
- More prone to spoilage (microbiological and oxidative)
- May taste flat or flabby to you but critics may disagree

Peynaud's Suppleness Index

Suppleness

=

Alcohol-(acidity + tannin)

SUPPLENESS

- S = 13.0% - (6.8+2.2) = 4.0

  alcohol acidity tannin

- S = 14.0% - (6.8 + 2.2) = 5.0

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Is it possible to manage high pH?

- Use higher levels of SO_2
- Create a “nutrient desert”
- Store at cool temperatures
- Increase vigilance and hygiene
- Release and sell wines earlier
- “Soi-disant” natural winemakers may disagree

TECHNOLOGY

- Yeasts to produce less alcohol
- Riper grapes = higher alcohols

  Alcohol removal/modification
- Compression of harvest period REQUIRES more equipment and processing capacity

MARKETING

- Adjustments to regional reputations and appellation systems

- Strategies to influence consumer demand
  --publicity for new styles
  --green credentials in your winemaking (solar power, recycled waste water etc)

LEGAL CONTROLS
REGIONALITY and APPELLATION

May need to change:

- Perception

- Legal status of varieties/blends/styles

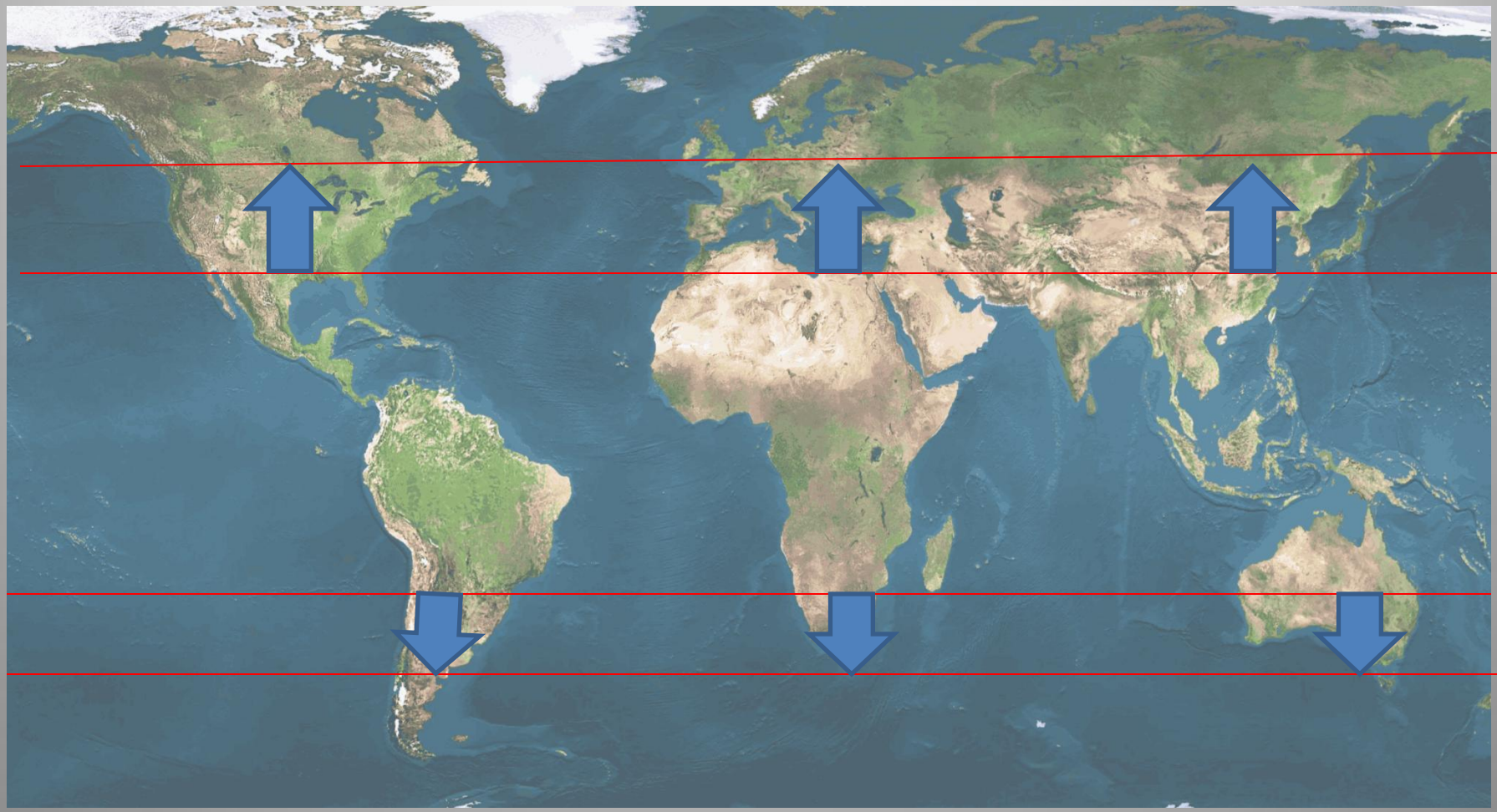
SHOULD I STAY OR SHOULD I GO?

MITIGATION and ADAPTATION

CHANGING THE GAME

- Geographic shift in production.
- Attitudinal shift in perception of region.
- Adjustments to legal controls (not so relevant in Australia). May need to change legal status of varieties/blends/styles.

MOVING NORTH OR SOUTH?



Geographic movement

In China, there is concern for giant panda habitat....

ECONOMICS

- Less money for lower quality grapes (and wine?)
- More tartaric acid needed
- Increased irrigation demand
- Compressed vintage period
- Greater disease pressure
- Carbon tax??

SUMMARY

- DIFFERENT VARIETIES
- DIFFERENT STYLES
- DIFFERENT WINEMAKING APPROACHES
- DIFFERENT PERCEPTIONS
- DIFFERENT ECONOMICS

It takes four people to drink a glass of English wine.....

...One victim, two to hold him down, and one other to pour the wine down his throat.

(from the English satirical magazine, Punch)