

# **BODEGA CATENA ZAPATA**



BODEGA CATENA ZAPATA MENDOZA, ARGENTINA/

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## Winkler Index & Mendoza Microclimates

Region	Clasification	Sum °C	Mendoza Areas	International Areas
I	Cold	> 1370 °C	Gualtallary - Altamira	Burgundy
II	Temperate	1371 - 1650	Agrelo - Villa Bastias	Bordeaux Napa
III	Warm - Temperate	1651 - 1925	Lunlunta	Cotes du Rhone
IV	Warm	1926 - 2205	Eastern Mendoza	San Joaquin
V	Very Warm	< 2205	---	Fresno



# Altitude's Effect on Climate

- Average Temperature.
- Sunlight Intensity



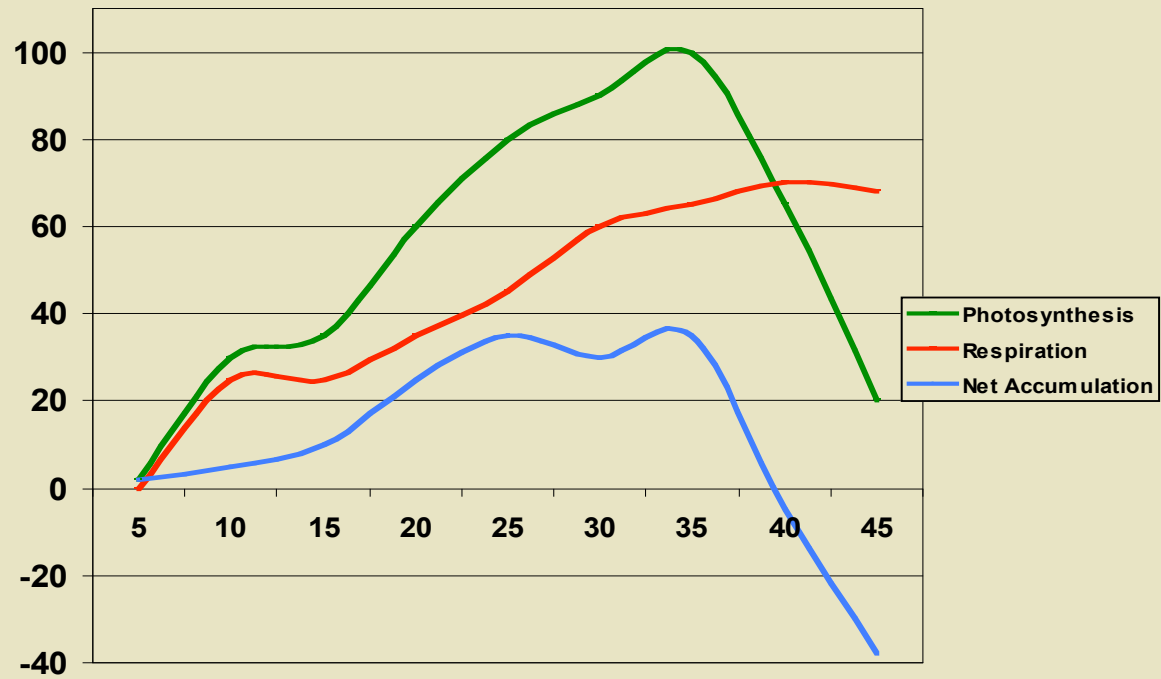
## Temperature & Vine Physiology

- Photosynthesis = Sugar production
- Respiration = Energy consumption

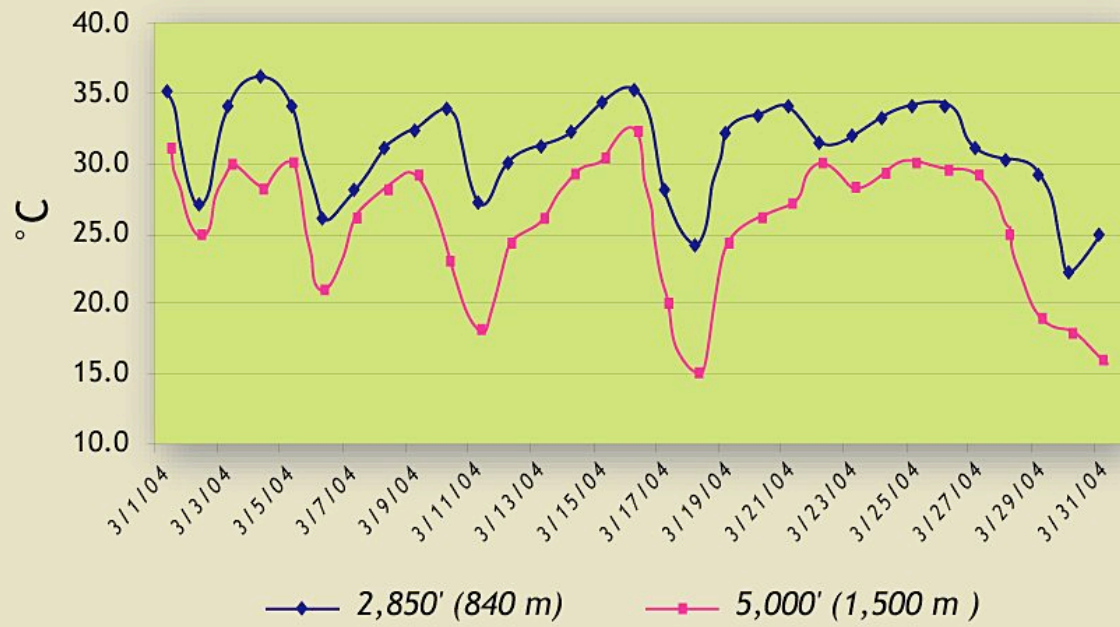
**Photosynthesis – Respiration = Net Accumulation**



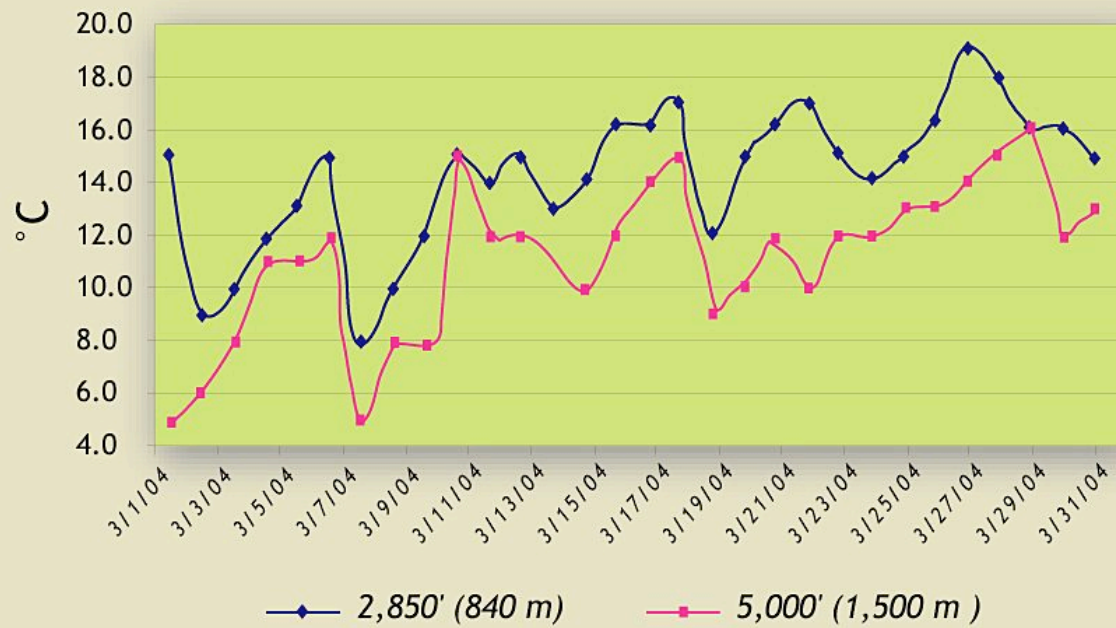
# Photosynthesis



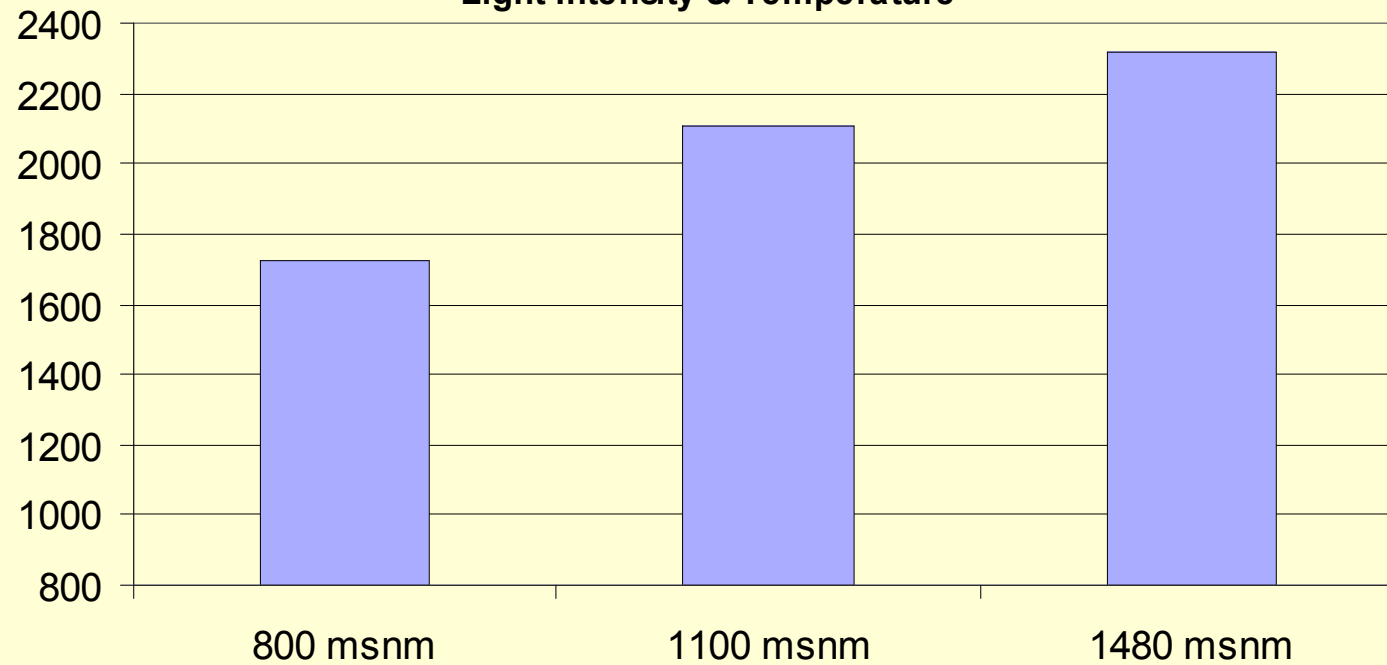
## MAXIMUM TEMPERATURE EVOLUTION



## MINIMUM TEMPERATURE EVOLUTION



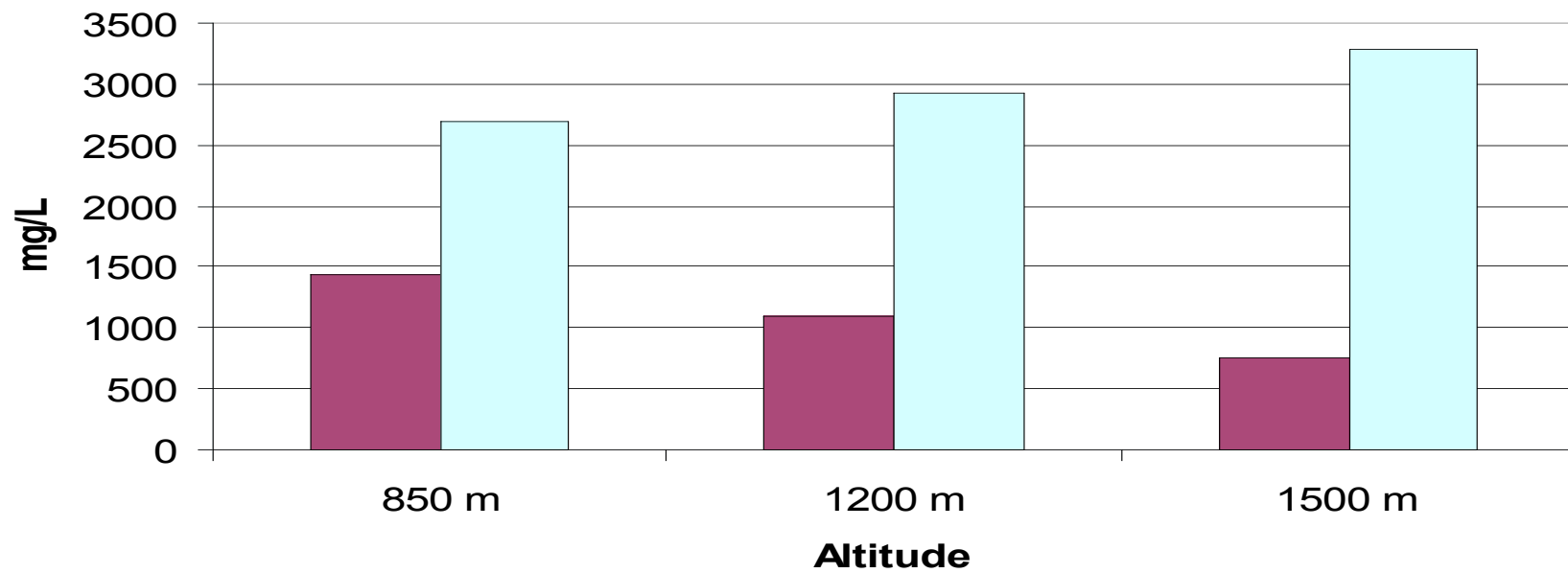
### Total Anthocyanins in Malbec Light Intensity & Temperature



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■ Monomeric Tannins □ Total Tannins

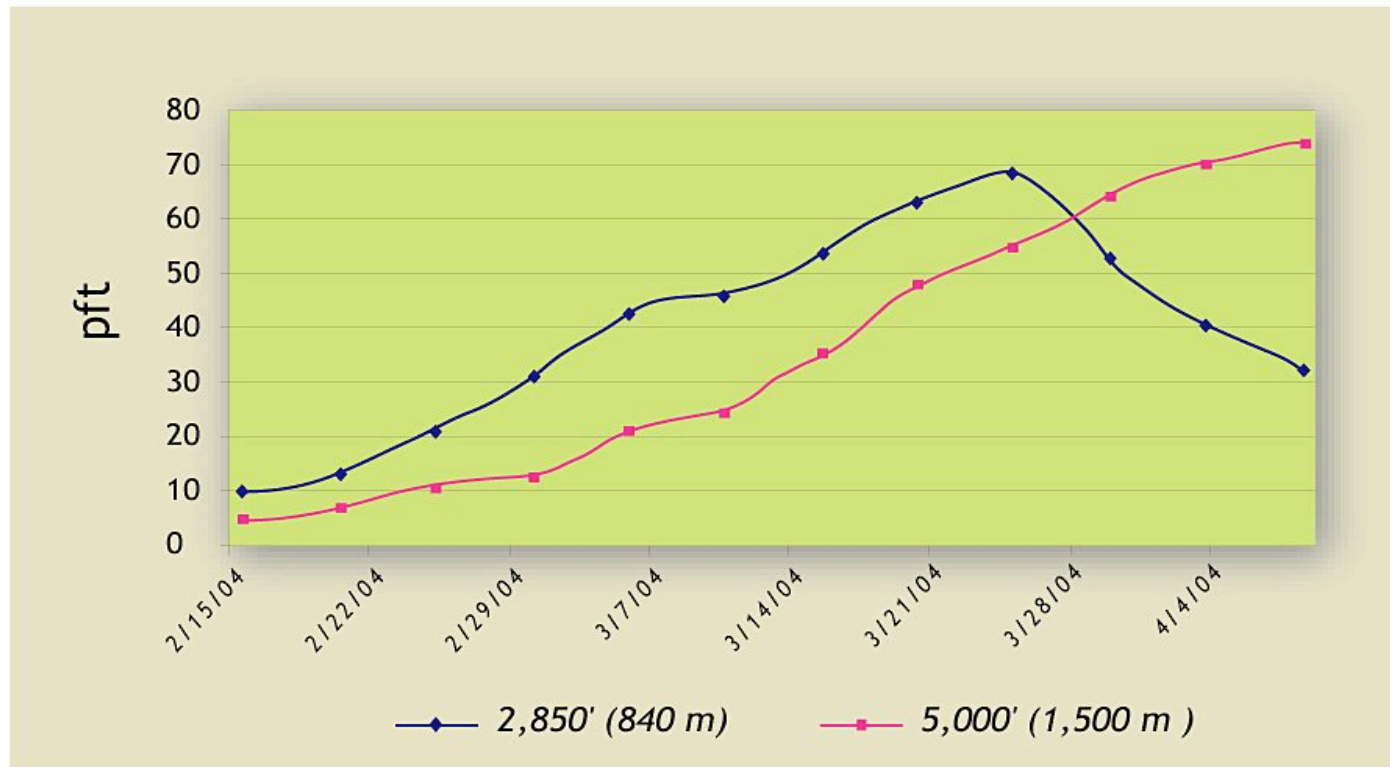


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# Evolution of Total Polyphenols during Malbec Maturation

## POLYPHENOLIC EVOLUTION



# Review of Temperature Effects on Malbec:

## Anthocyanins

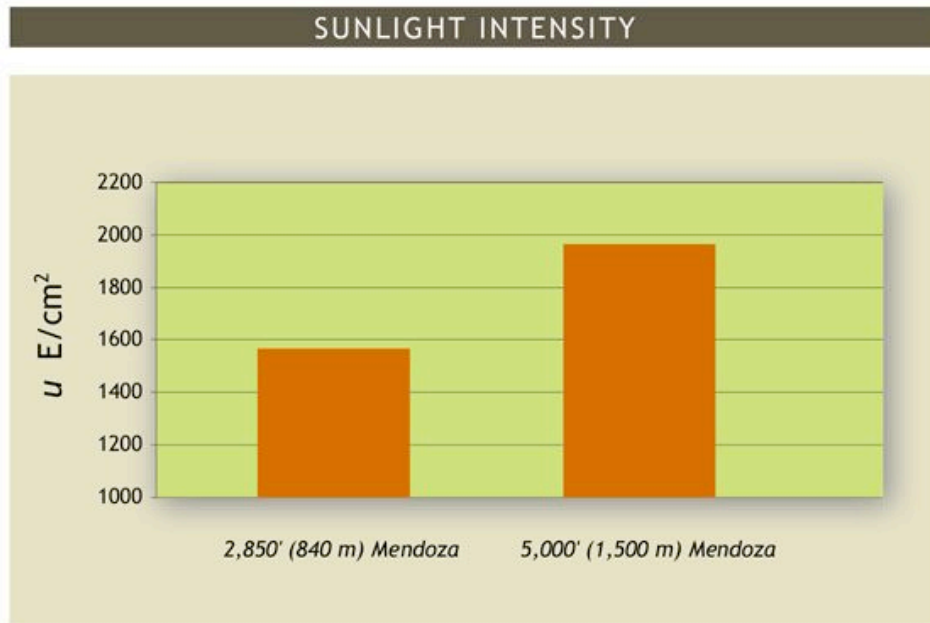
## Tannins



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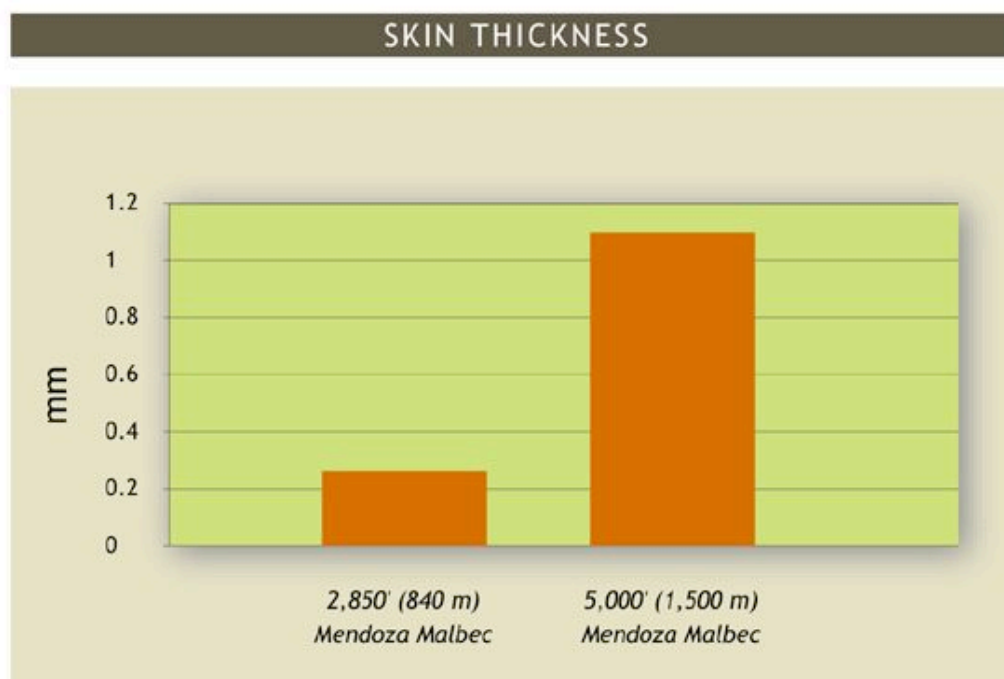
# Effect of sunlight intensity on Malbec



- Increased altitude = Increased sunlight intensity.
- Increased sunlight intensity = Increased photosynthesis.
- Increased photosynthesis = Increased secondary metabolism.
- Increased sunlight intensity = Increased synthesis of beta-ionnona (Malbec).
- Increased sunlight intensity = Increased synthesis of phytoalexins (resveratrol).



## Physiological Effect of Sunlight Intensity on Malbec



Increased thickness = Increased concentration  
of anthocyanins & polimerized taninns.



# Review of the Effect of Sunlight Intensity:

Anthocyanins

Tannins

Aromas

Phytoalexins (Resveratrol)

