Drought in Spain

A winegrower's challenge

Abstract

Motivation for choosing this topic

Drought is becoming more and more of a problem in many Spanish wine regions, except for the regions affected directly by the Atlantic.
On top of that, temperatures have been increasing for years and will probably be increasing in the future. This combination of higher temperatures and decreasing precipitation poses a major threat for viticulture in these regions. Hence, there are big challenges ahead for many Spanish wine growers.
Spain has the largest vineyard area in the world, is the third largest producer and is known for a large amount of bulk production. However, there are a lot of wine growers in Spain focused on quality, not quantity. They have to make big efforts to adapt to the changing climate and keep a sustainable business. In the process, many of them feel the urgence to work with nature instead of against it.
My motivation for choosing this topic is a combination of the two topics described above; a genuine interest in the harsh effects of climate change and how do these wine growers in Spain cope with the challenges they're facing.

Problem/objective

The objective of this thesis is to examine the effects of drought on quality-focused viticulture in Spain and what could be done to mitigate the risks.
Many areas in Spain already have a Mediterranean or continental climate with dry and hot summers. Projections for the future, however, show more and longer periods of drought and higher temperatures. Also, adverse weather like extreme precipitation will occur more often, making things worse for the wine growers.
Adaptation strategies are proposed to cope with these challenges in the future. In fact, adapting will be essential. But even then, keeping a sustainable wine business may become impossible. Besides hard work, there's a lot of uncertainty for the wine growers.
Besides continuous research about the topic and the wine growers making their efforts, policy-makers should play an active role; within the DOs, in Spain and in the EU.

Methodology

Before starting the actual research, I read articles in a Dutch wine magazine about the role of water, about planting the right grape varieties and adaptation strategies. After following a masterclass about drought in Spain I started my research with reading a lot of scientific material about the matter. This gave a better picture of the scope of the problem.

Because I also wanted to get to know the opinions of the wine growers themselves, I designed a small questionnaire. Unfortunately, there were less responses than I hoped but it still provided valuable information.
Water scarcity is an urgent matter in Spain because the balance between resources and demand is always very fragile. That's why I also wanted to examine what the role of different policy- and lawmakers is.

Content

The thesis is divided in the following 5 sections

1. **Introduction:** A general view on Spain as a wine producing country, its climate and the effects of climate change and hence drought.

2. **The scientific view:** Examination of research on the effects of drought on viticulture and possible adaptation strategies, the use of irrigation and water in general.

3. **The winegrowers' views:** what are their views and ideas about the consequences of drought, adaptation strategies, irrigation, water use and the financial implications.

4. **Legislation and regulations:** What regulations, laws and initiatives exist within the different DOs/DOCa's, in Spain and in the EU and what is the role of the *Consejos Regulador.*

5. **The future:** Regarding the future what are the different views, opinions and initiatives by scientists, wine growers and the policy- and lawmakers.

Conclusion

Wine growers in Spain have to deal with a lot of challenges regarding drought and they will be tested more and more in the future. However, there's also a lot going on to address these challenges and mitigate the risks. This is done by adapting to the new reality and hence making the right choices before planting a vineyard and, when established, how to manage it sustainably.
Nevertheless, there's a strong possibility that in some regions adaptation strategies will prove to be insufficient. In other words, for the wine growers, uncertainty may become the biggest challenge of all.