

Sustainable production of innovative sparkling wine

Fabio Fehrenbach

Carola Drönnert

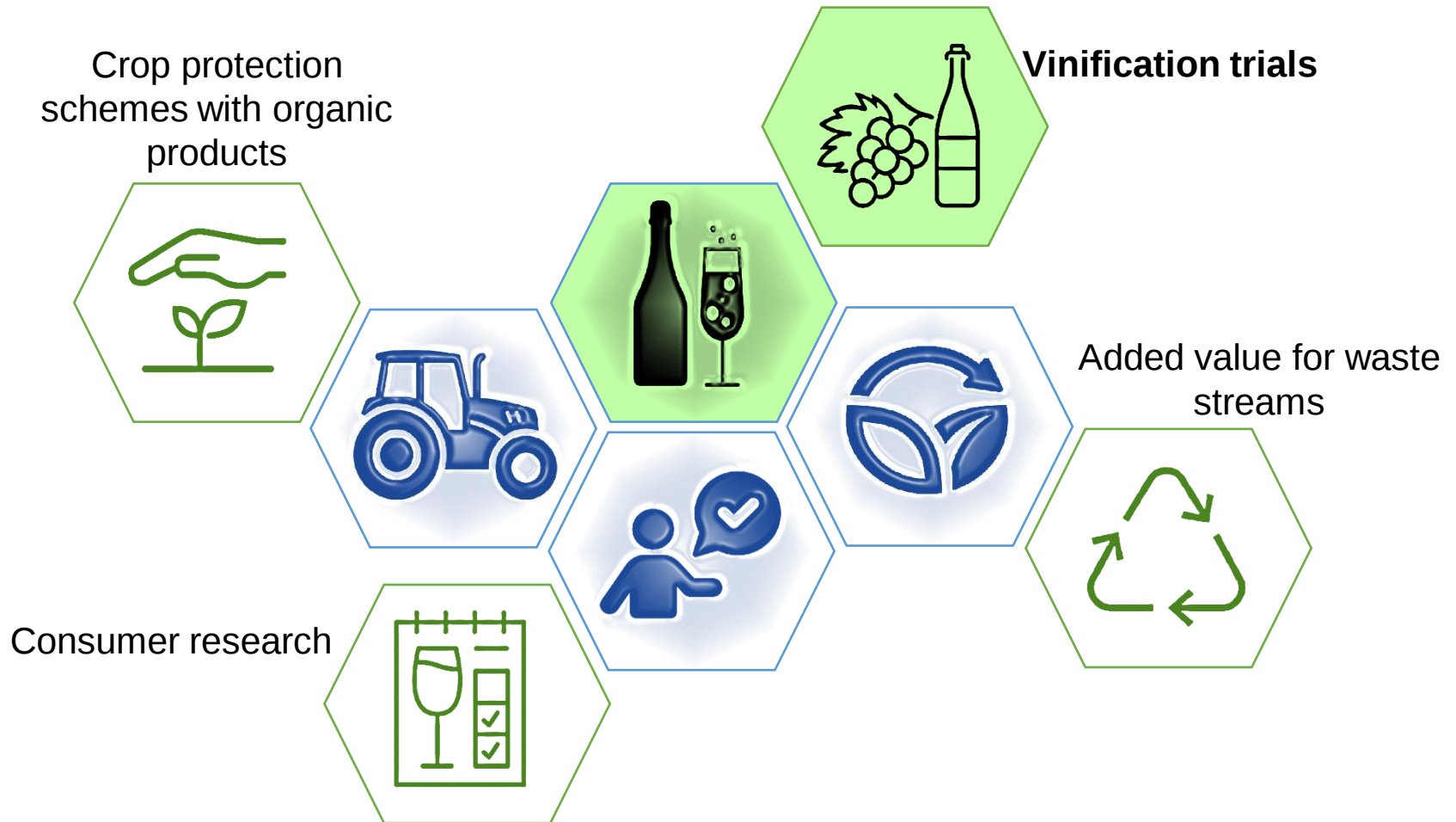
Department Oenology - Trial vinification, WBI Freiburg

Institute of Viticulture (WBI)

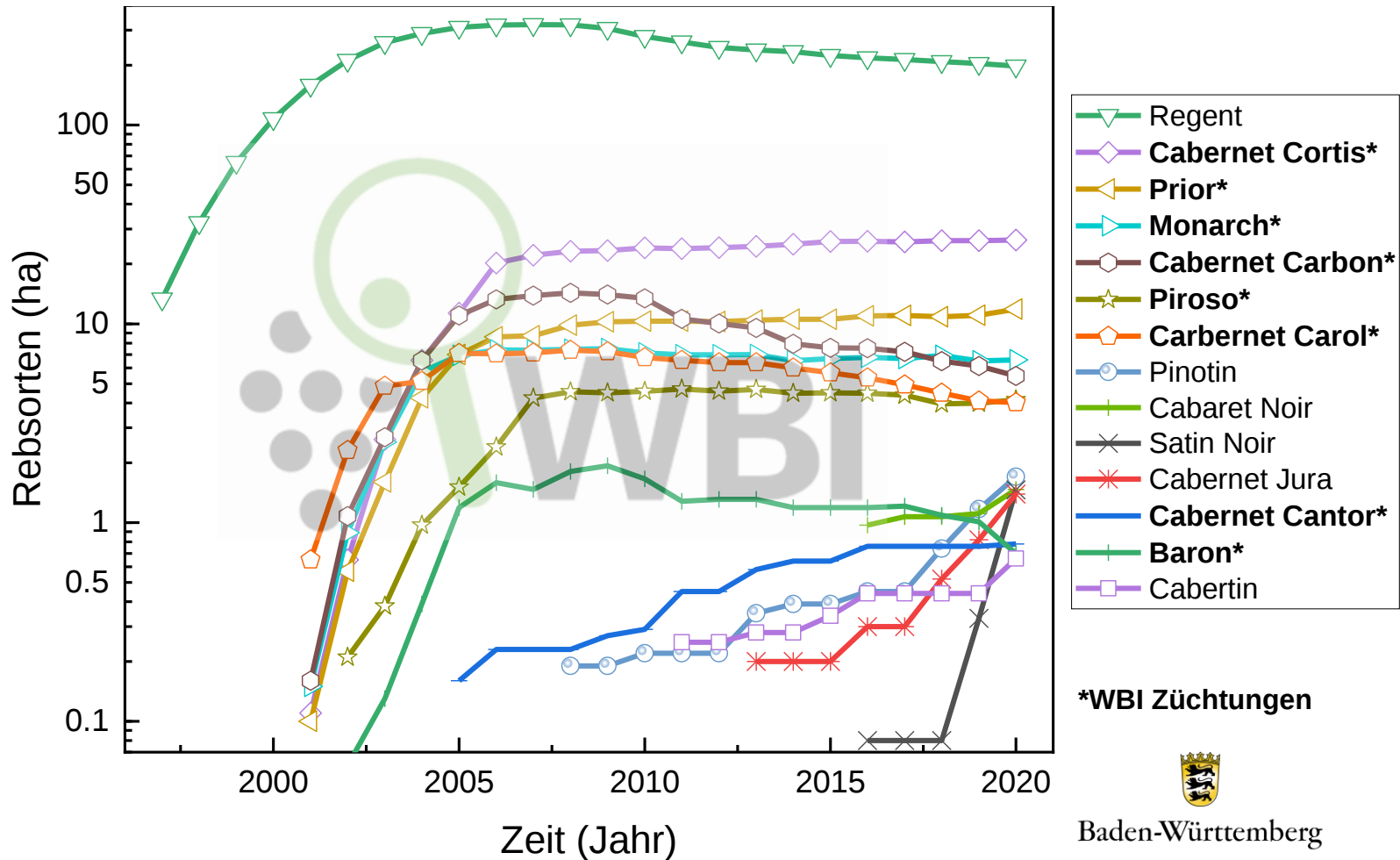


- Optimisation of wine quality
- Improving the economy
- Enhancing the sustainability

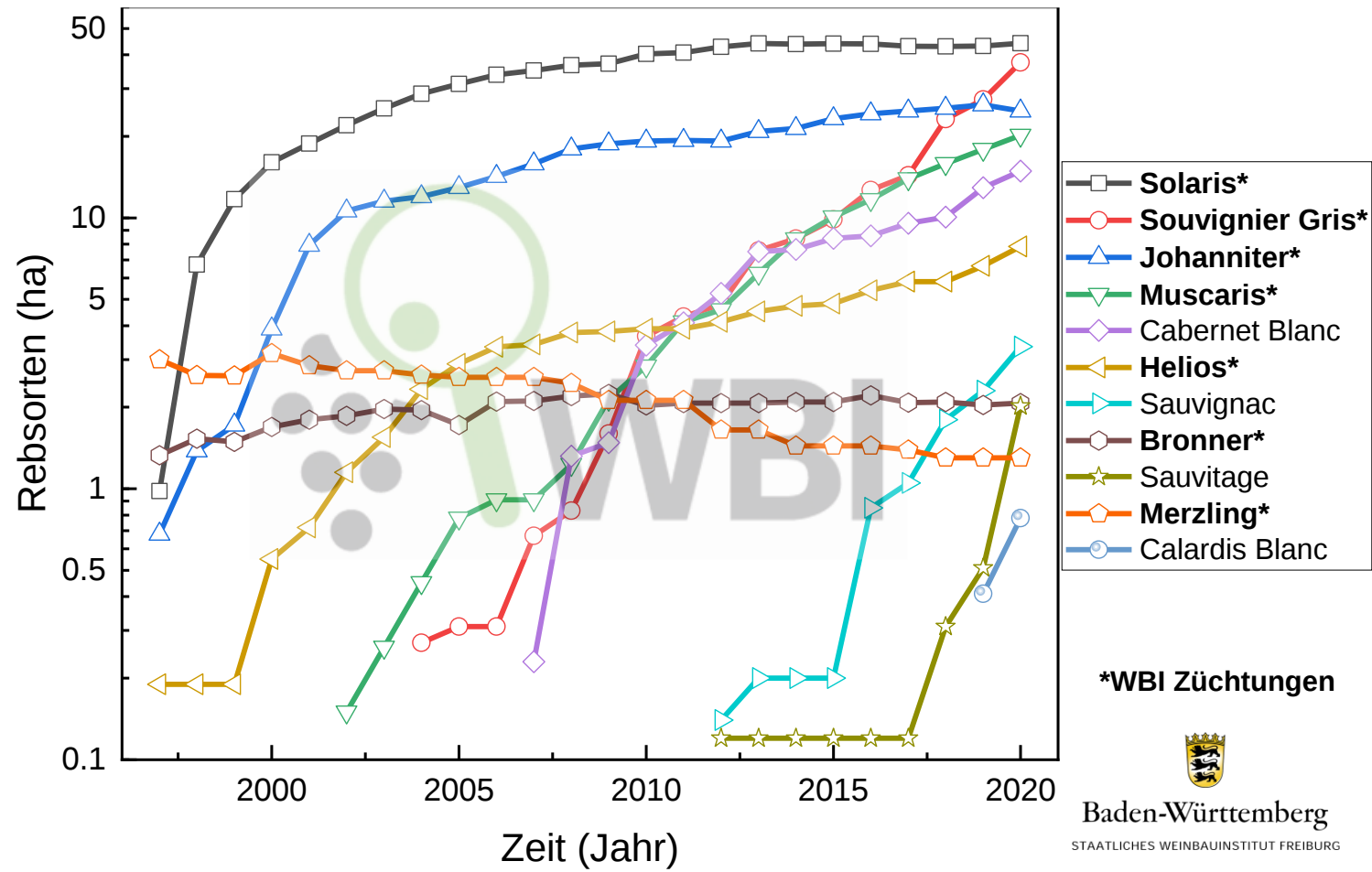
Project Approach



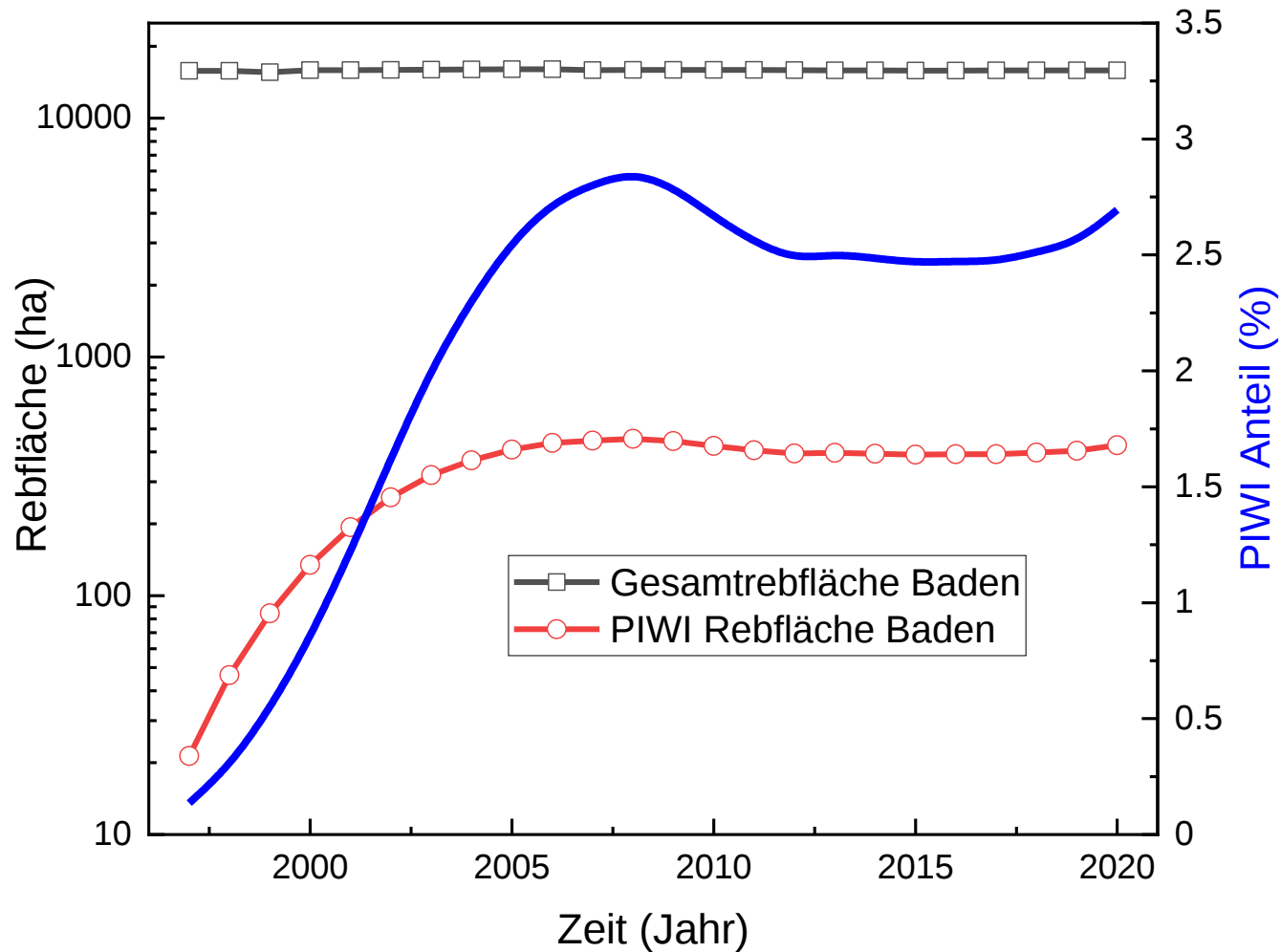
PIWI varieties - red



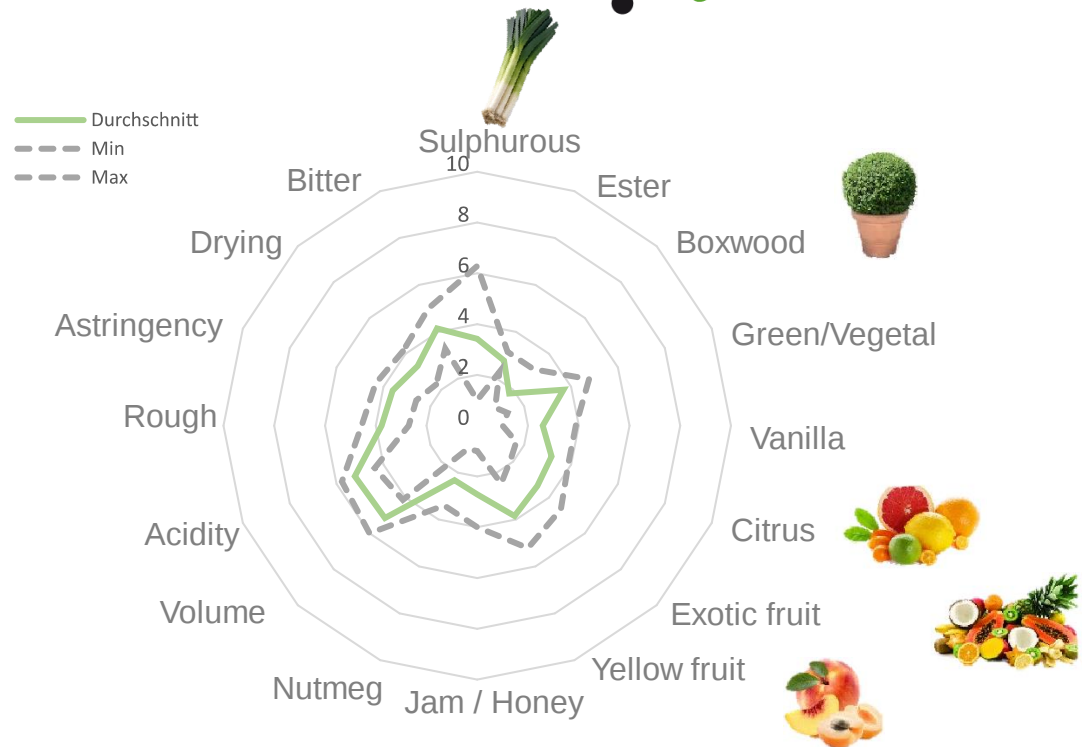
PIWI varieties - white



PIWI share in Baden

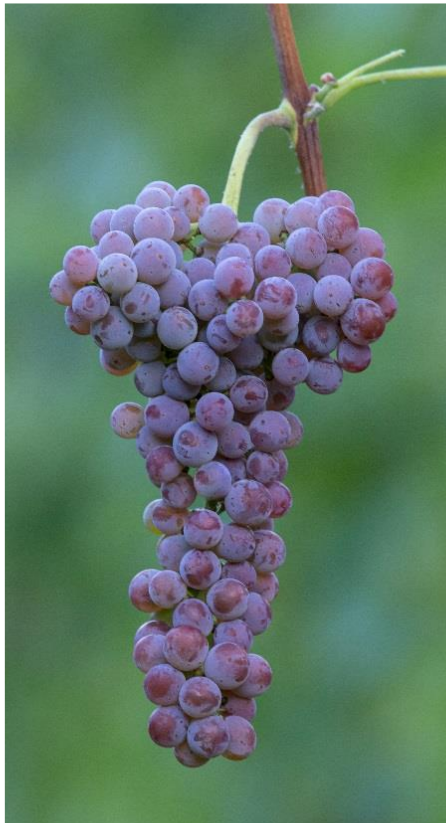


Muscaris

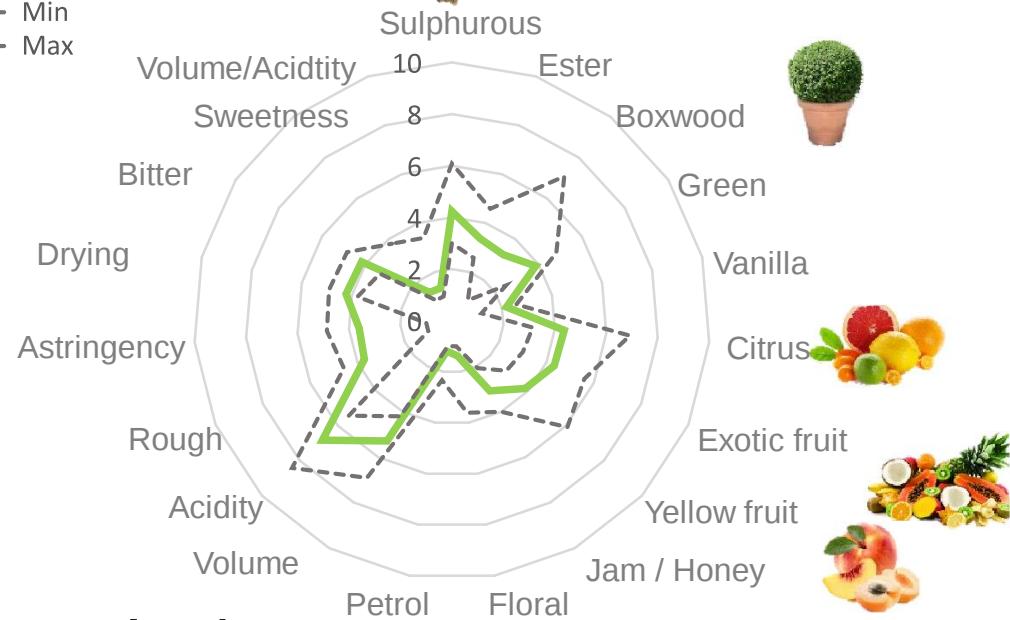


- Yield: 70-110 kg/a
- Must weight: 85-105° Oe
- Ripeness: 1 week after Müller-Thurgau

Souvignier Gris

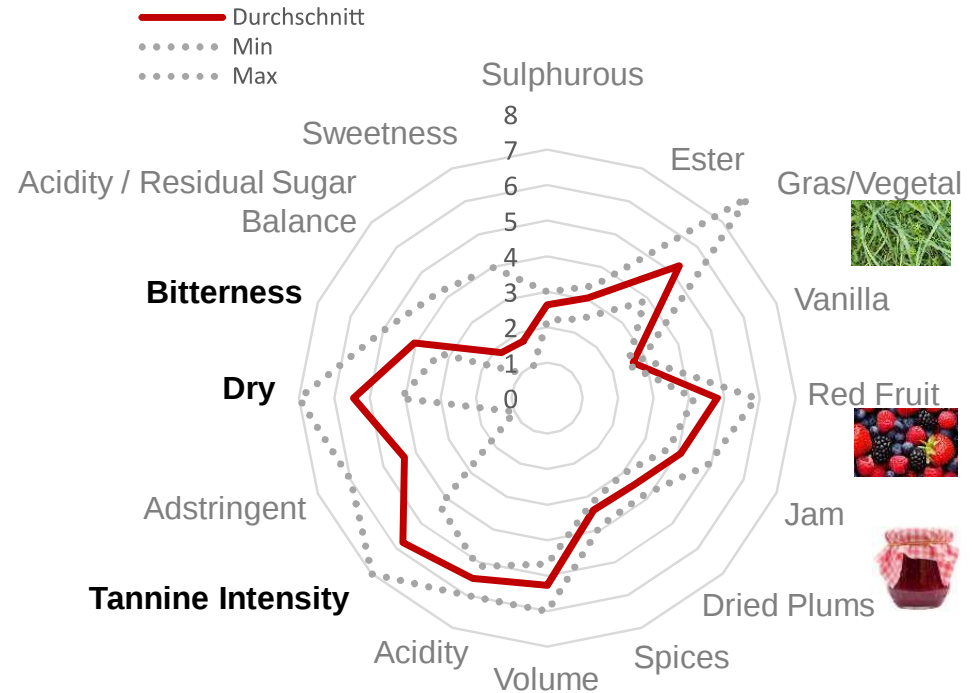


— Durchschnitt
- - - Min
- - - Max



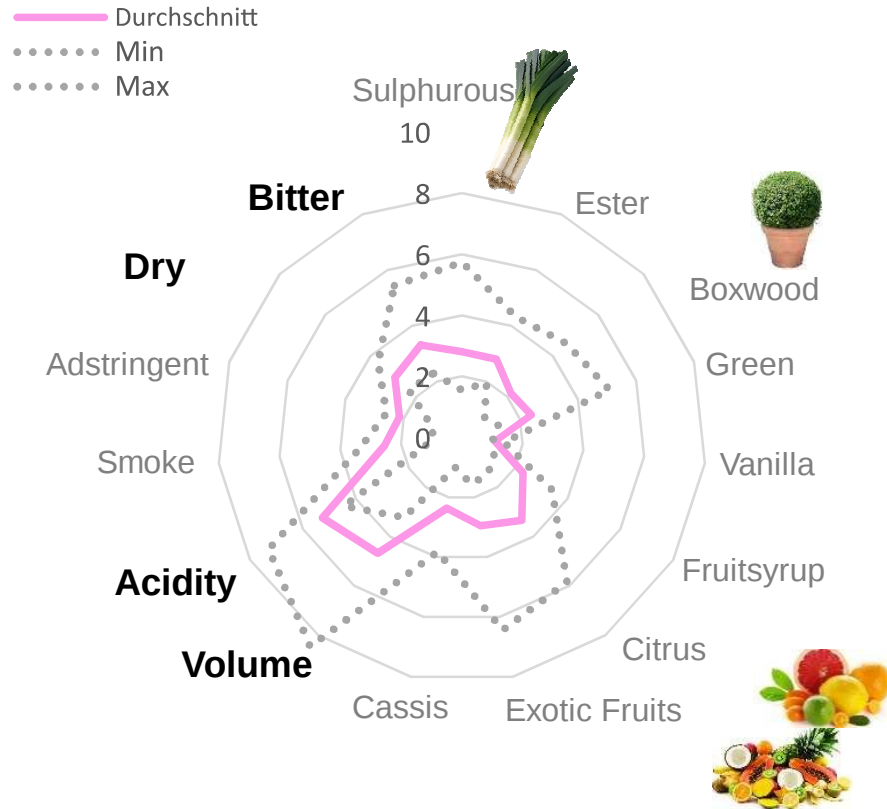
- Yield: 90-140 kg/a
- Must weight: 85-105° Oe
- Ripeness: between pinot blanc and pinot gris

Cabernet Cortis



- Yield: 80-120 kg/a
- Must weight: 90-105° Oe
- Ripeness: 10 days prior to pinot, for rosé 14 days prior to pinot

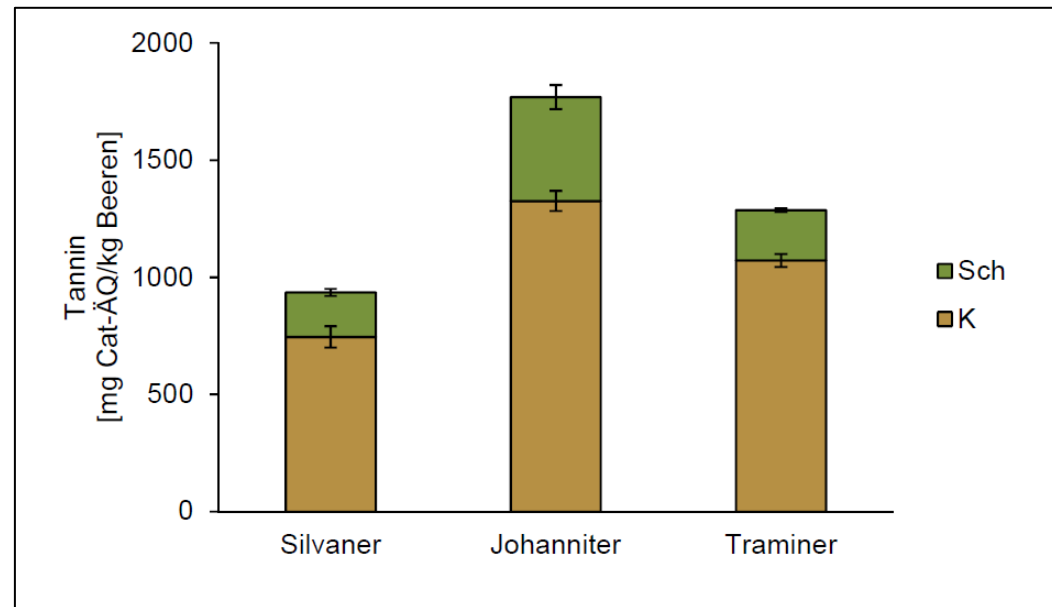
Cabernet Cortis - Rosé



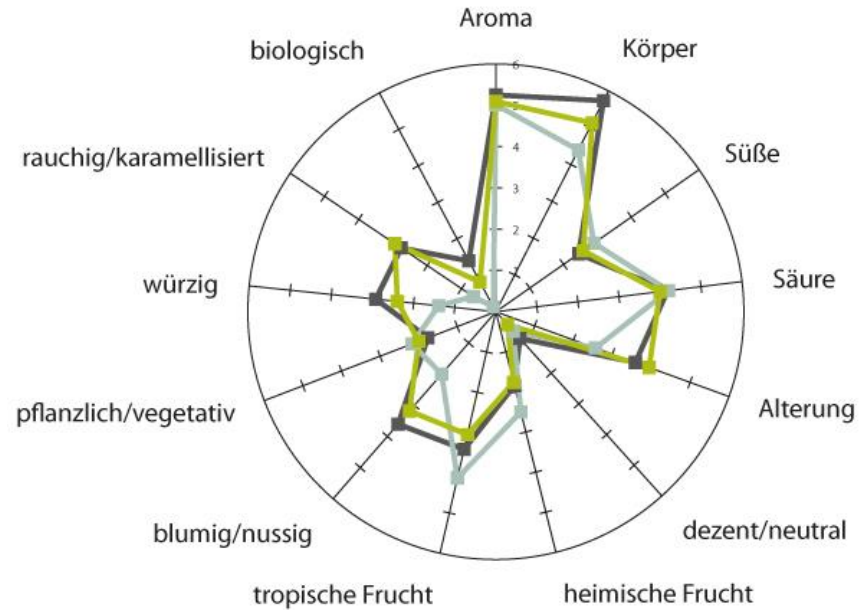
Johanniter



- Yield: 100-130 kg/a
- Must weight: 85-100°Oe
- Ripeness: before Riesling



Chardonnay



- Yield: 80-120 kg/a
- Must Weight: 80-105°C
- Ripeness: shortly before Riesling

Challenges in vinification

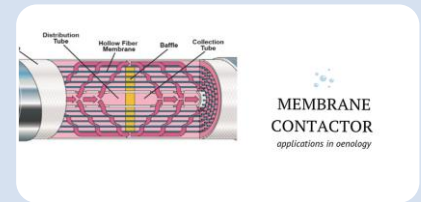
- lower pressability
- firm berry shell
- stronger hold onto stem
- darker colours – red wine



breeding aim has active and / or passive impact



Methods of sparkling wine production



Traditional
„Champagne“ from
Souvignier Gris

Fruity Rosé
sparkling wine –
from Cabernet
Cantor und
Cabernet Cortis

Pet Nat Muscaris

Frizzante Muscaris

Important parameters in sparkling wine production

Ripeness

Pressing

Base wine storage

Tirage liqueur

Maturation on lees

Dosage

Alcohol content 9 – 10,5 %Vol.

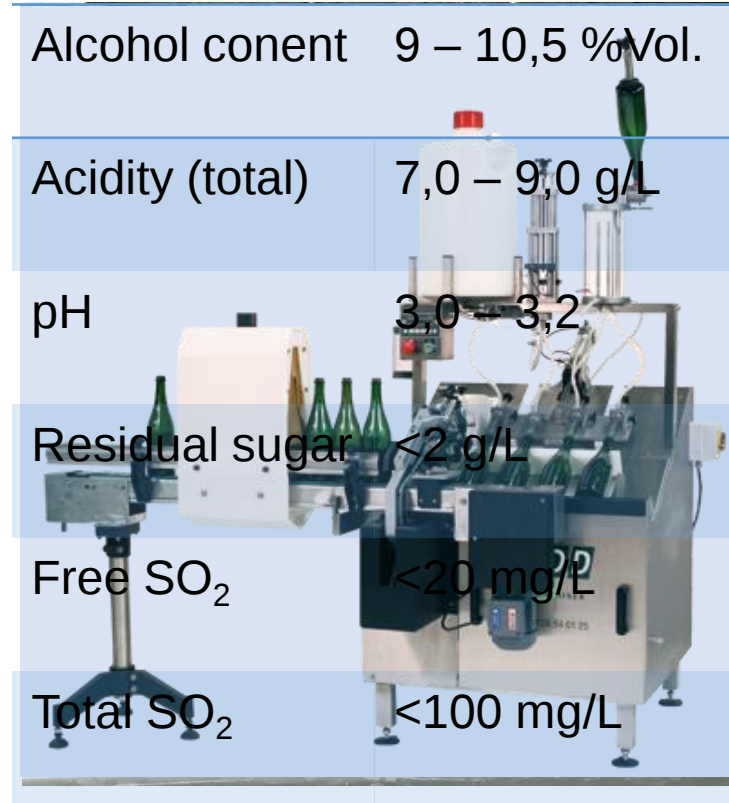
Acidity (total) 7,0 – 9,0 g/L

pH 3,0 – 3,2

Residual sugar <2 g/L

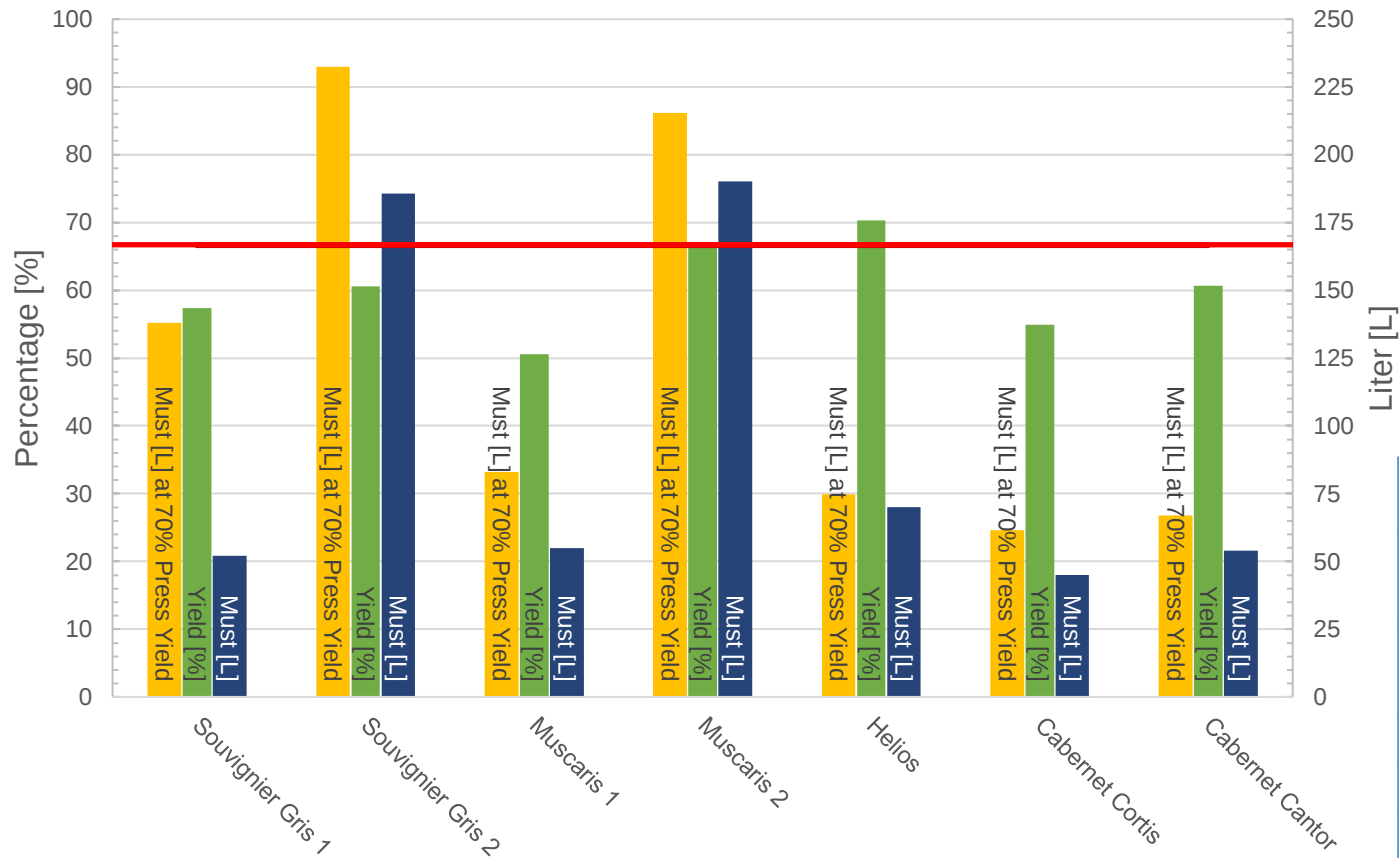
Free SO₂ <20 mg/L

Total SO₂ <100 mg/L



Press Yield - Harvest 2021

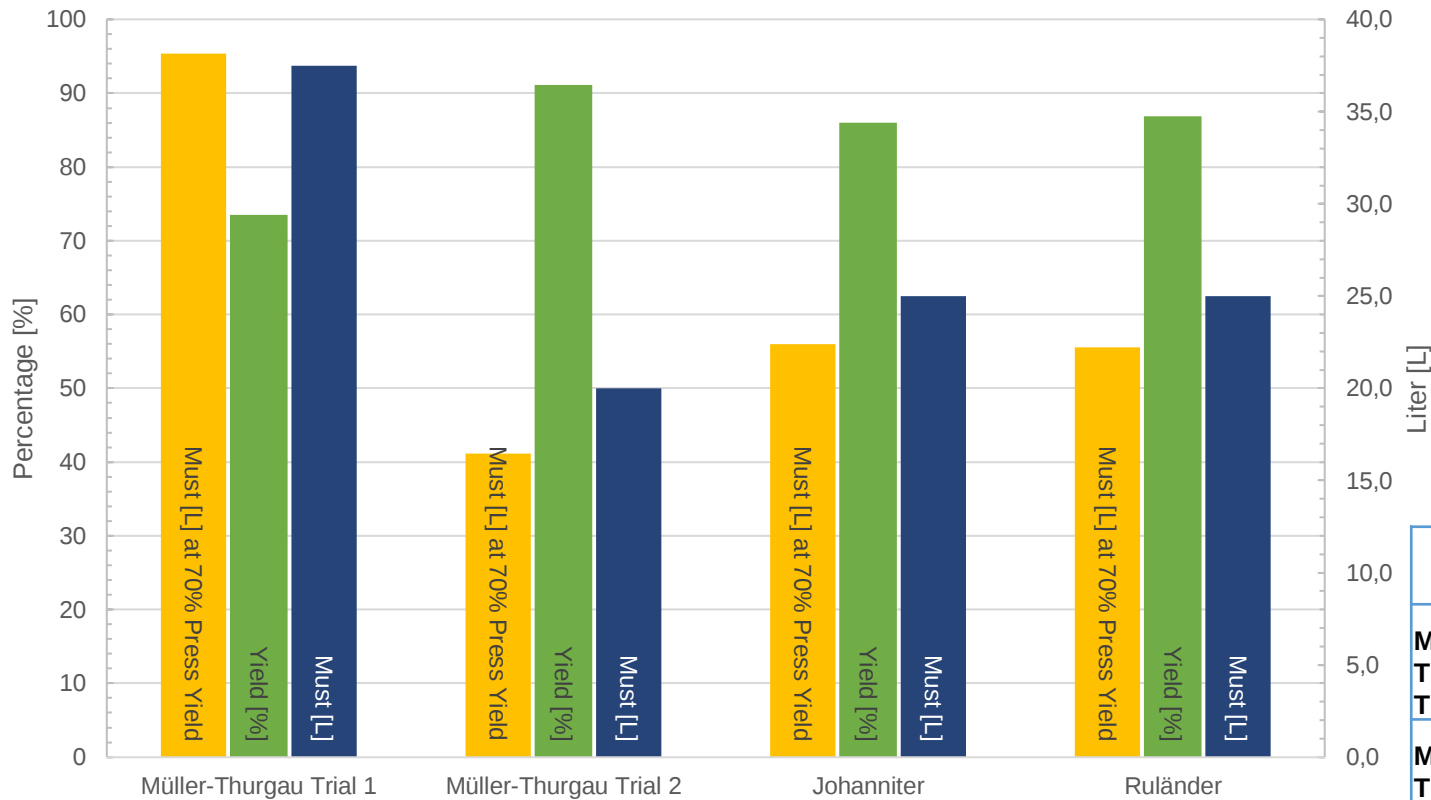
Pressability of Base Wine for Sparkling Wine



Varietal	Weight Grapes [kg]	Relative Density
Souvignier gris 1	197	1,0870
Souvignier gris 2	332	1,0824
Muscaris 1	118,5	1,0891
Muscaris 2	307,5	1,0860
Helios	106,7	1,0714
Cab. Cortis	88	1,0738
Cab. Cantor	95,8	1,0766

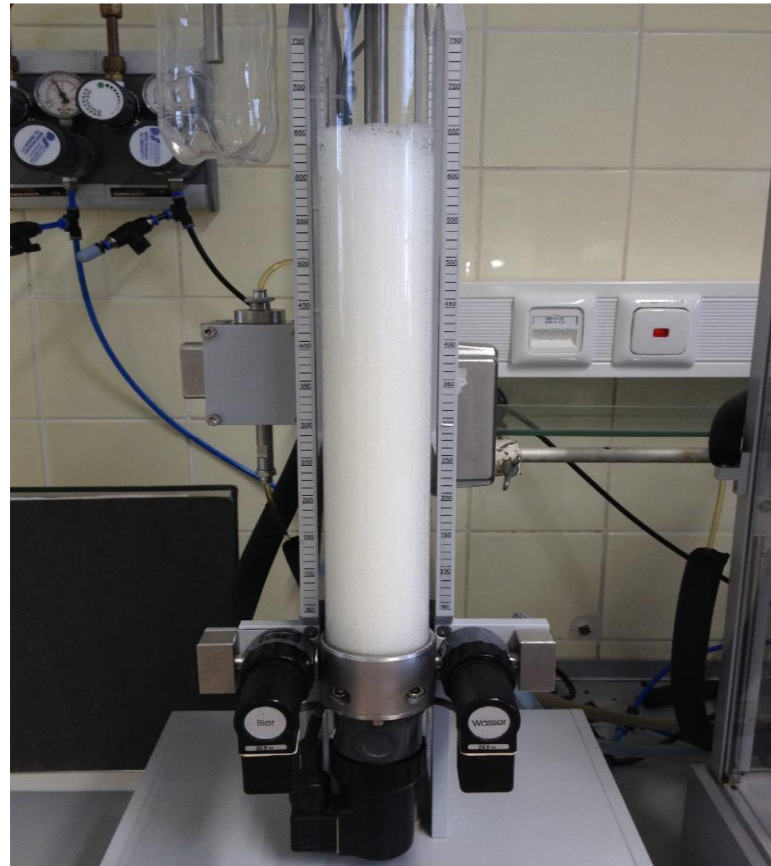
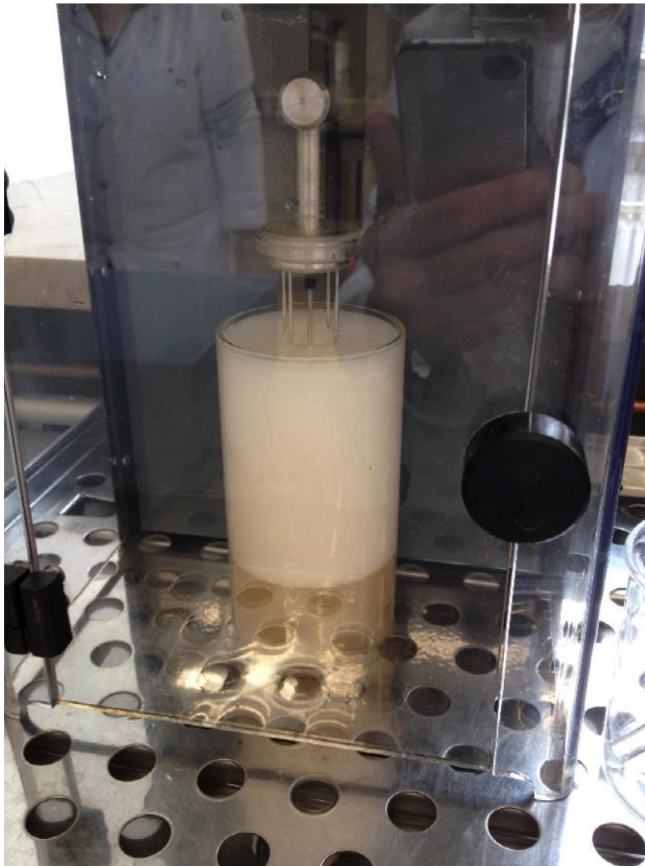
Press Yield - Harvest 2021

Pressability of Non-Sparkling Base Wine



	Grape Weight [kg]	Relative Density
Müller-Thurgau Trial 1	54,5	1,0681
Müller-Thurgau Trial 2	23,5	1,0707
Johanniter	32	1,1007
Ruländer	31,75	1,1030

Foam measurements



Current work



base wine storage, next step:
filtration, tirage liqueur



Frizzante production





Contact details:

Fabio Fehrenbach – WBI fabio.fehrenbach@wbi.bwl.de +49 (0) 761 40165 2104

Carola Drönner – WBI carola.droenner@wbi.bwl.de +49 (0) 761 40165 2107