Competitiveness of Wine Grape Production - Updated results

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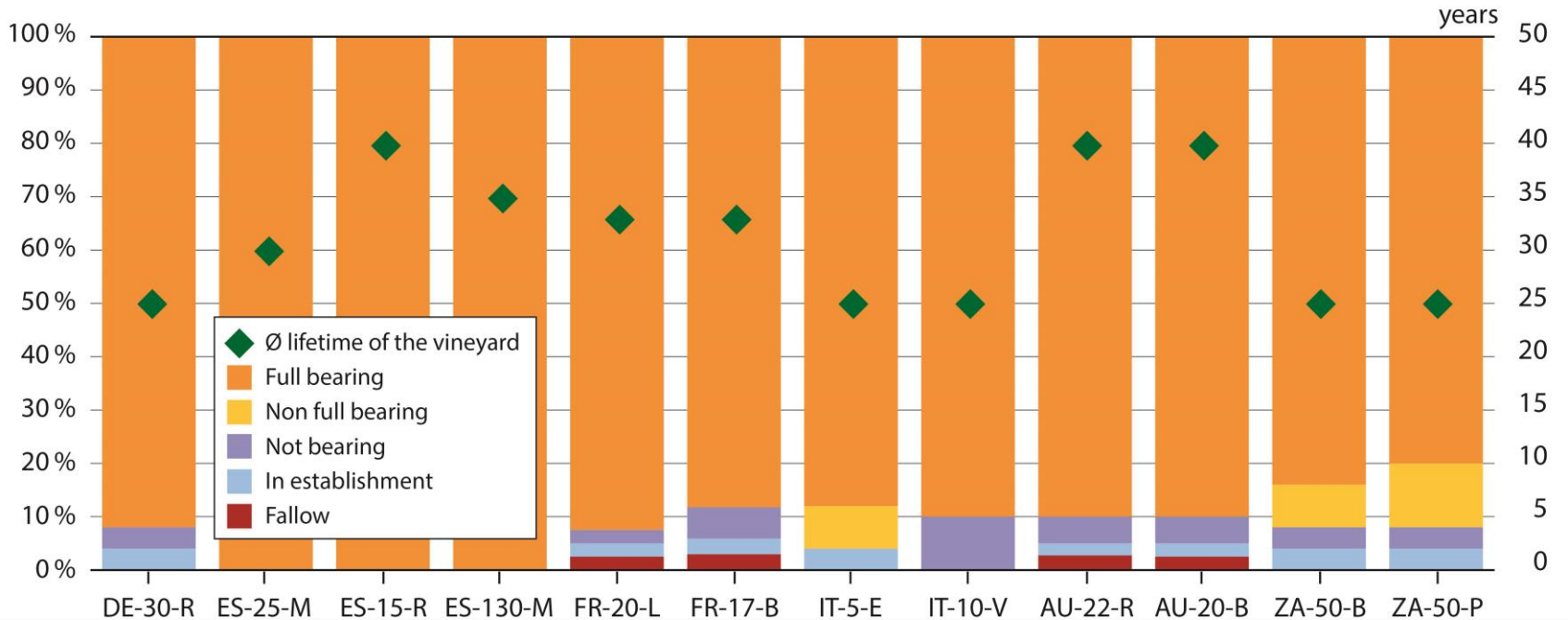
Framework of the analysis

- Economic analysis up to the point of grape harvest
  - ideally considers all single operations
  - processing into wine is not considered
- Results (EUR/ha or EUR/t) calculated as farm averages across
  - all varieties, variety specific analysis is possible
  - all age phases from establishment to full bearing
- Targeted quality: grapes for **quality still bulk wine**, not premium qualities (3 farms in sample target higher qualities or regional brands, 1 farm produces Prosecco)
- Year 2011 = grape harvest in 2011

Overview: 12 typical wine grape farms in 6 countries

	Country	Region	ha	Production 2011, t	3 most important varieties
EU	Germany	Rheinhessen (R)	30	349	Müller Thurgau, Riesling, Dornfelder
	Italy	Emilia-Romagna (E)	5	38	Sangiovese
		Veneto (V)	10	151	Prosecco, Pinot Grigio, Cabernet S.
	France	Languedoc (L)	20	184	Shiraz, Merlot, Carignan
		Bordeaux (B)	17	123	Merlot, Cabernet S. + F.
	Spain	La Mancha (M)	25	173	Tempranillo, Airen
		La Mancha (M)	130	1,316	Tempranillo, Shiraz, Merlot
		Rioja (R)	15	98	Tempranillo
Non - EU	Australia	SA – Riverlands (R)	22	415	Chardonnay, Shiraz, Cabernet S.
		SA – Barossa (B)	20	103.5	Chardonnay, Shiraz, Cabernet S.
	South Africa	Breedekloof (B)	50	923	Chenin Blanc, Colombar, Shiraz
		Paarl (P)	50	558	Chenin Blanc, Cabernet S., Shiraz

Age structure of typical wine grape farms



- Utilisation period 25 – 40 years
- 7-20 % young vineyards, not full bearing

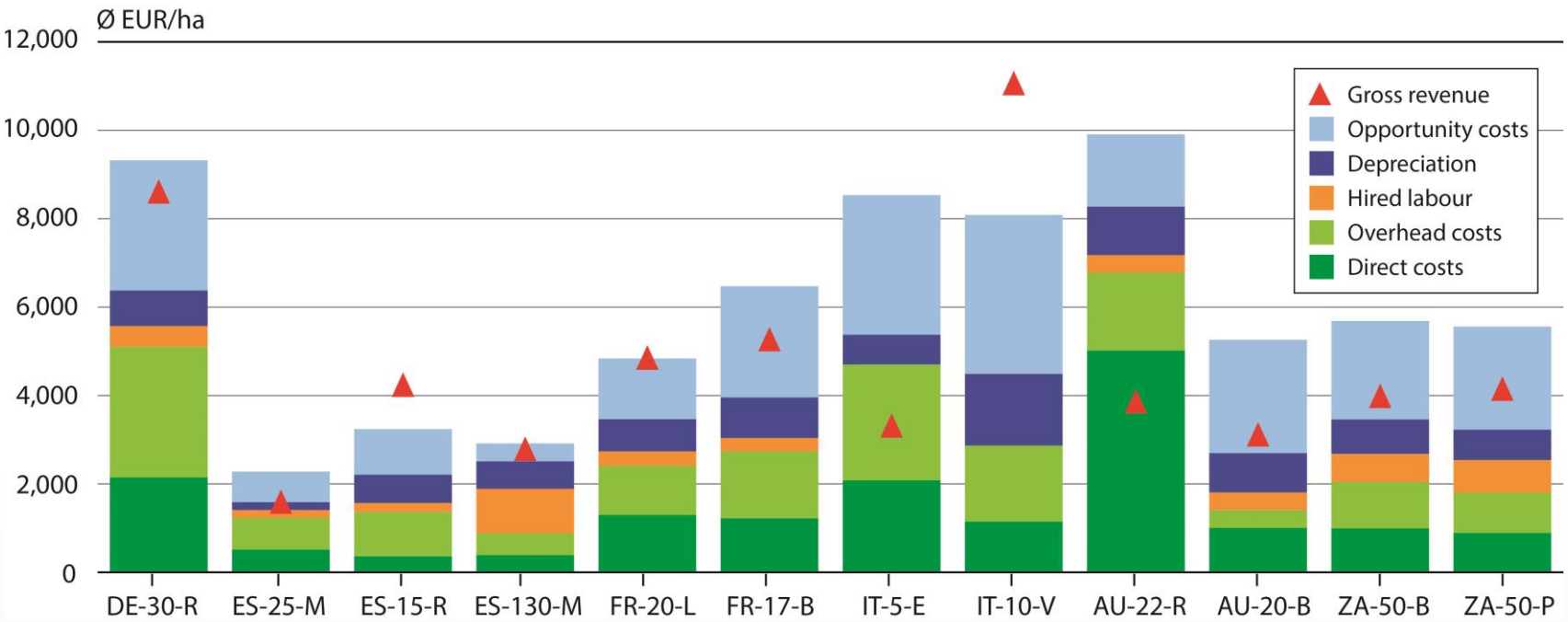
Yield range of important wine varieties, 2011

Tonnes of grapes per ha, only full bearing vineyards

White wine: 4.5 to 25 t/ha depending on variety, highest yields in Australia & South Africa (irrigated)
Red wine: 4 to 20 t/ha depending on variety, high yields in AU, DE, IT and ZA

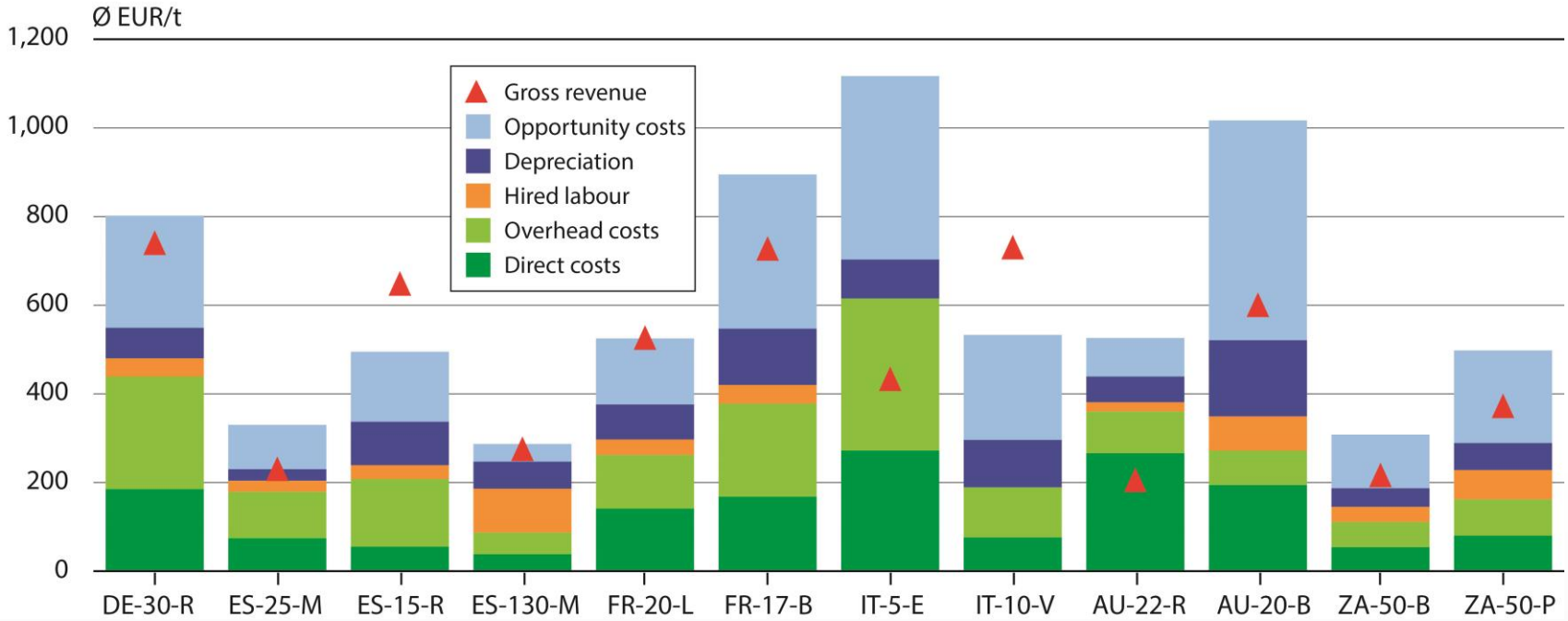
AU & ZA: clear yield differences between 2 regions in same country → different production systems, quality philosophies and target markets

Total costs and revenues in 2011 (€/ha)



- Differences in level of production costs
- ES-15-R, IT-10-V: profitable since total costs covered
- In most cases opportunity costs are only partially covered
- AU-22-R: Revenue completely spent on irrigation water. Due to severe draught strict regulations in 2011 increase costs for water enormously

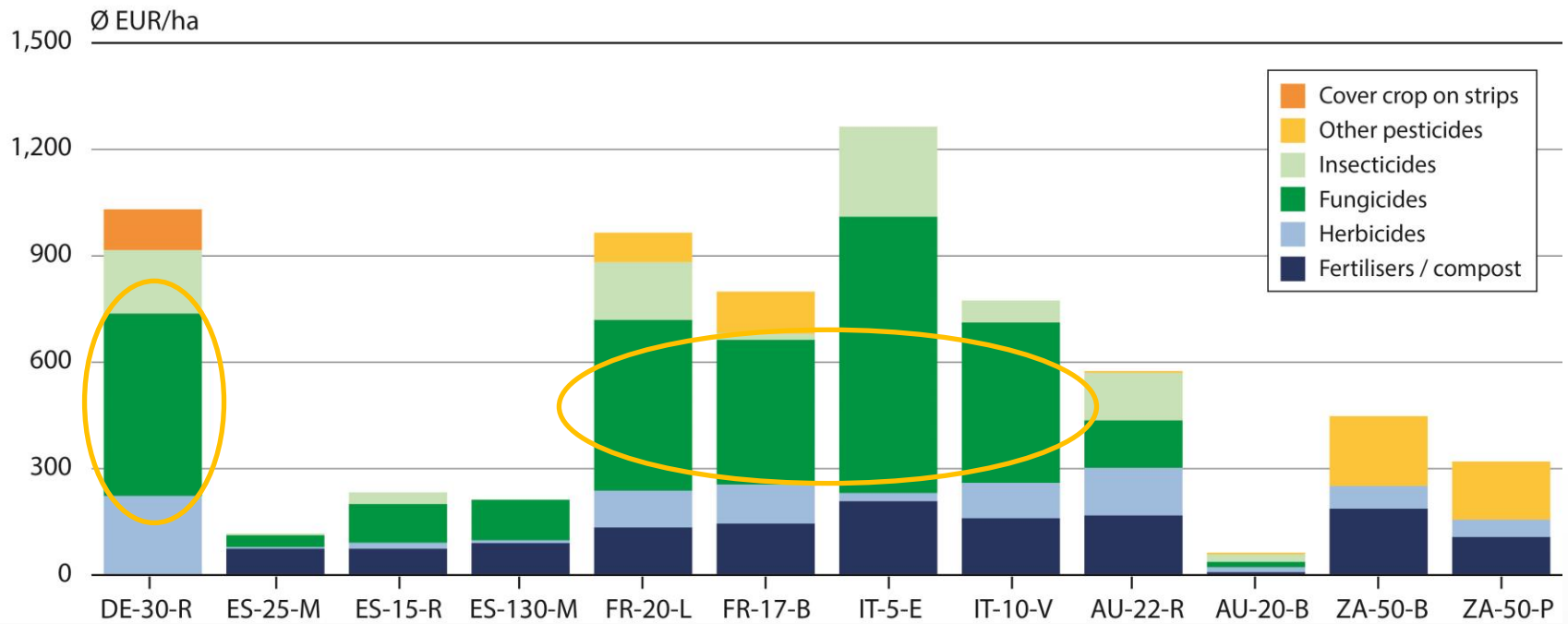
Total costs and revenues in 2011 (€/t)



- Differences in production costs and revenues

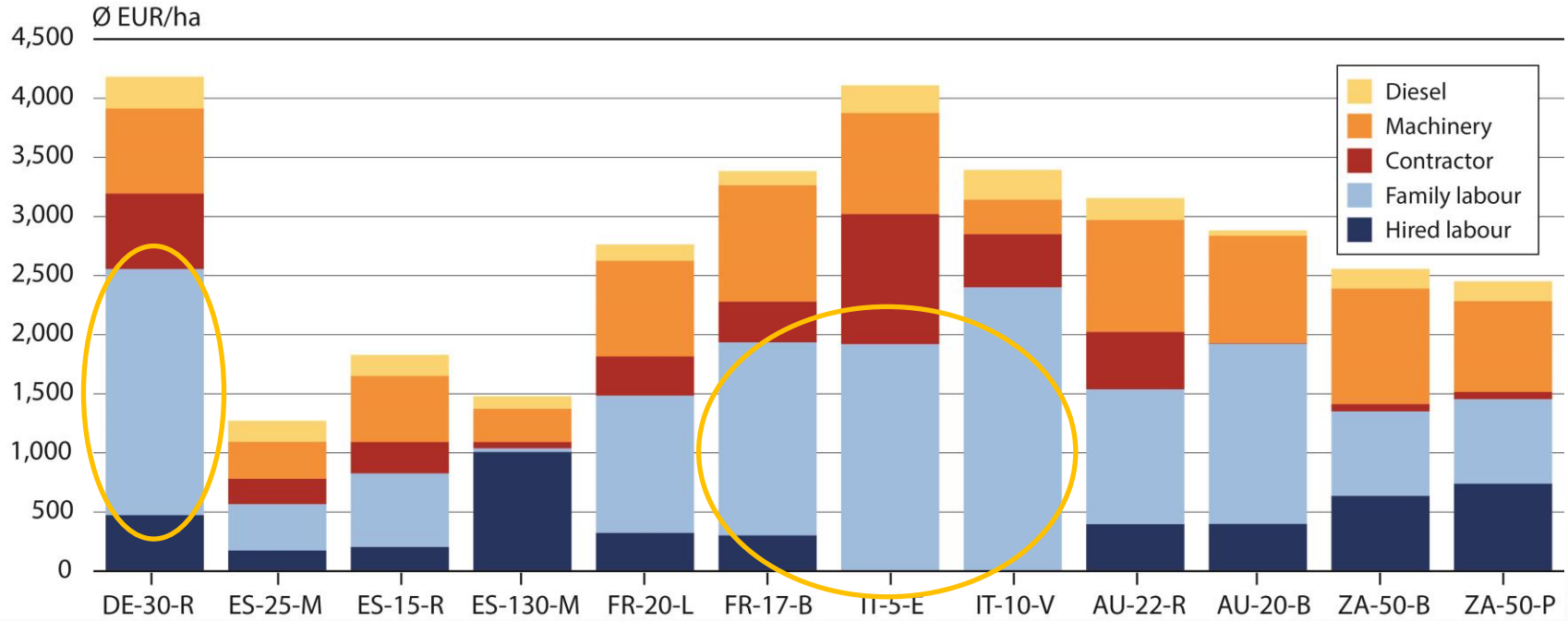
→ Likely to be driven by differences in wine quality objectives

Costs for fertiliser and pesticides, 2011



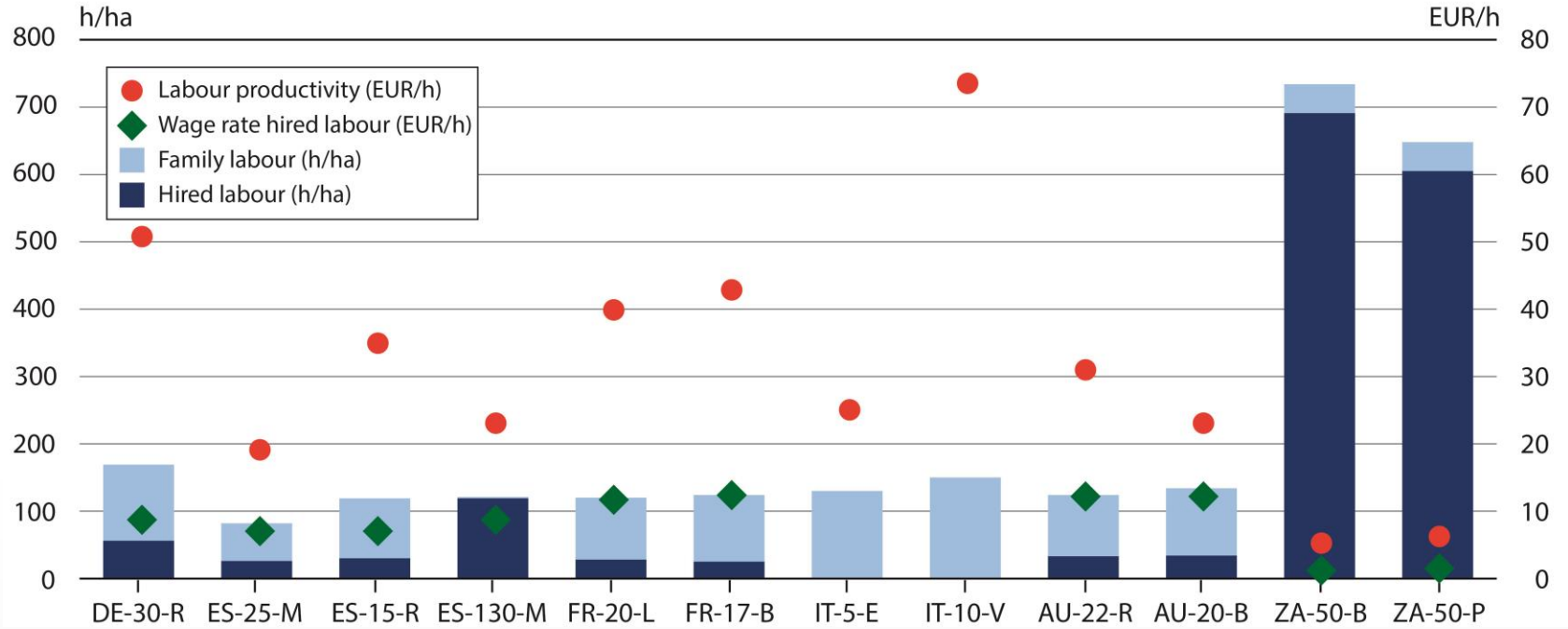
- Lowest expenditures for agrochemicals in ES, AU-20-B (low input - low output regimes)
- Fungicides most important in Europe
- Other pesticides (FR, ZA): Sum of herbicides, fungicides and insecticides since different pesticides could not be distinguished

Operating costs, 2011



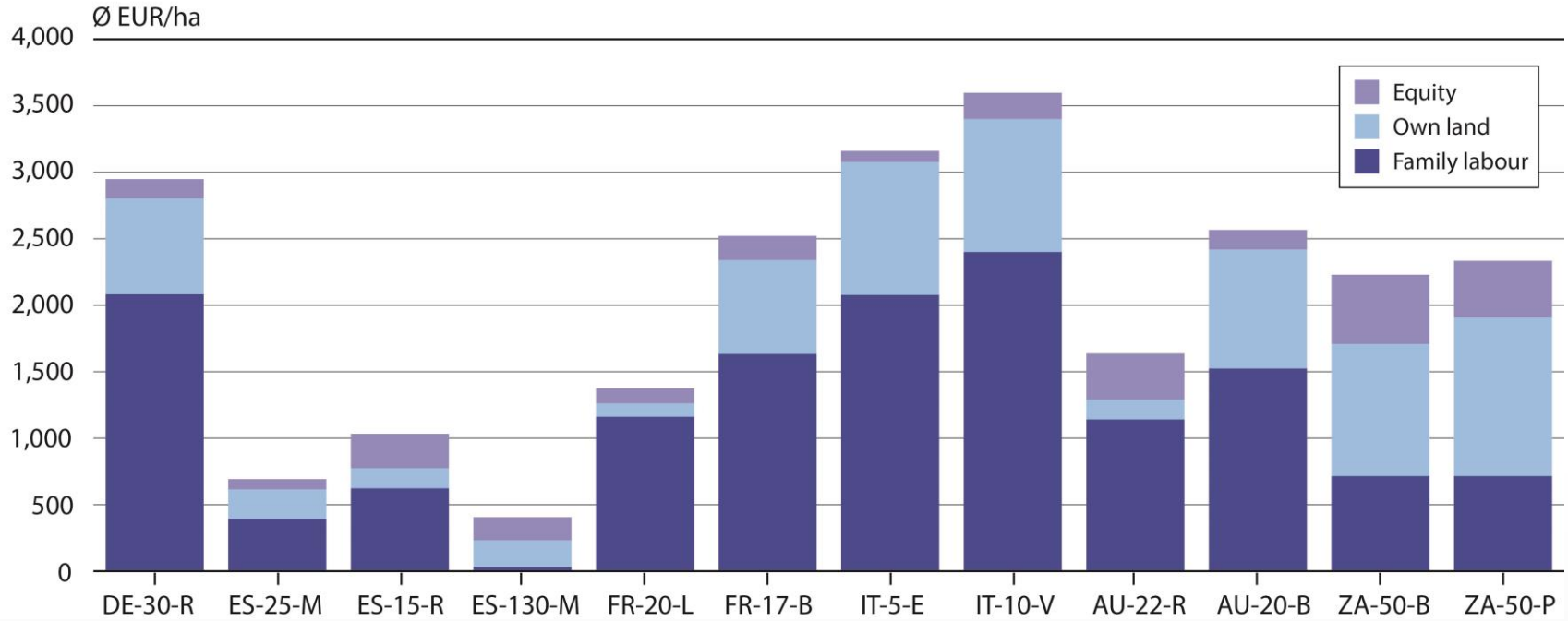
- Labour costs major cost factor
- DE + IT: highest costs for family labour
  → numerous hours + high opportunity costs (16-18.5 EUR/h)
- Contactor costs: almost on every farm (mainly for machine harvest)
- ES-130-M: lowest machinery cost (economies of scale for 130 ha)

Labour use and labour productivity, 2011



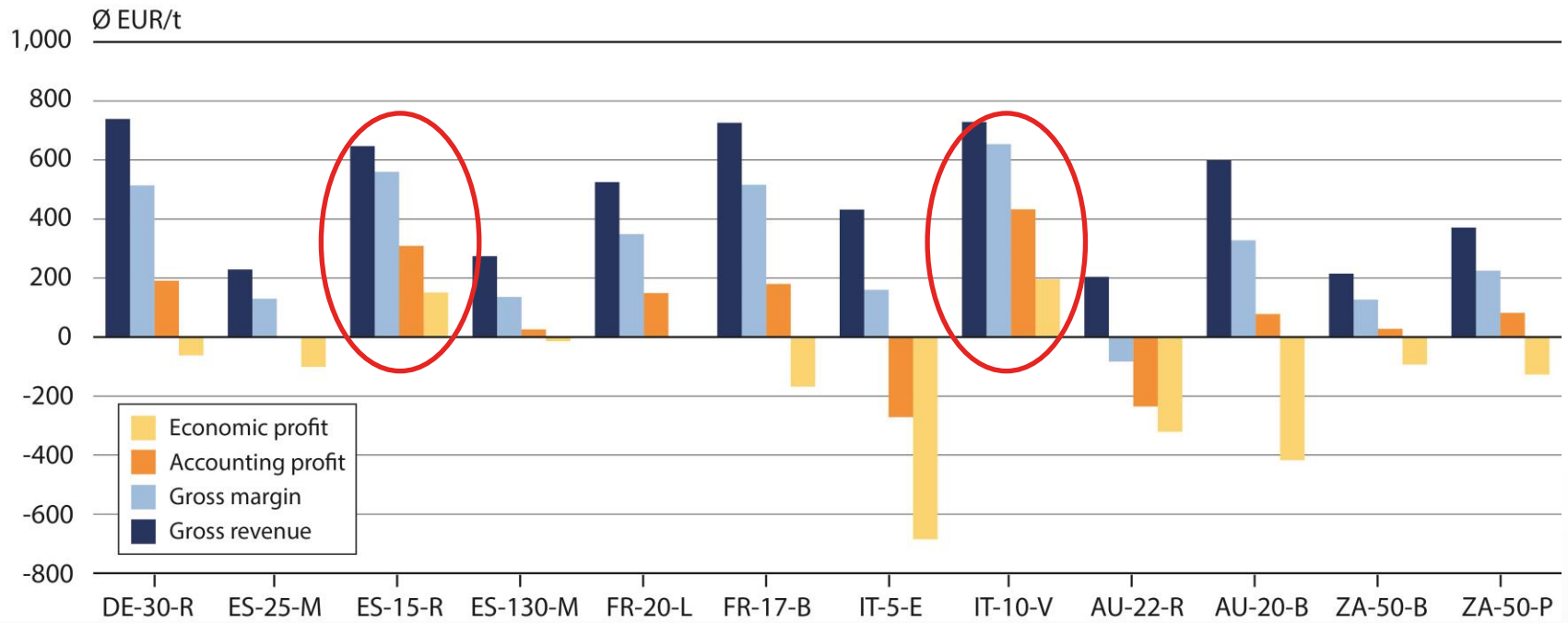
- ZA: permanent and seasonal workers; non-efficient use of permanent personnel during low season
- IT-10-V: high gross revenues → highest labour productivity

Opportunity costs, 2011



- IT: opportunity cost for family labour high since no hired labour used
- Land costs: high in DE, IT, AU Barossa, ZA (competition with other uses)

Profitability indicators, 2011



- Gross margin = Gross revenue – direct costs – hired labour
- Accounting profit = Gross margin – overhead costs – depreciation
- Economic profit = Accounting profit – opportunity costs

Machine Pruning, Languedoc, FR

Grape delivery to cooperative, Rheinhessen, DE

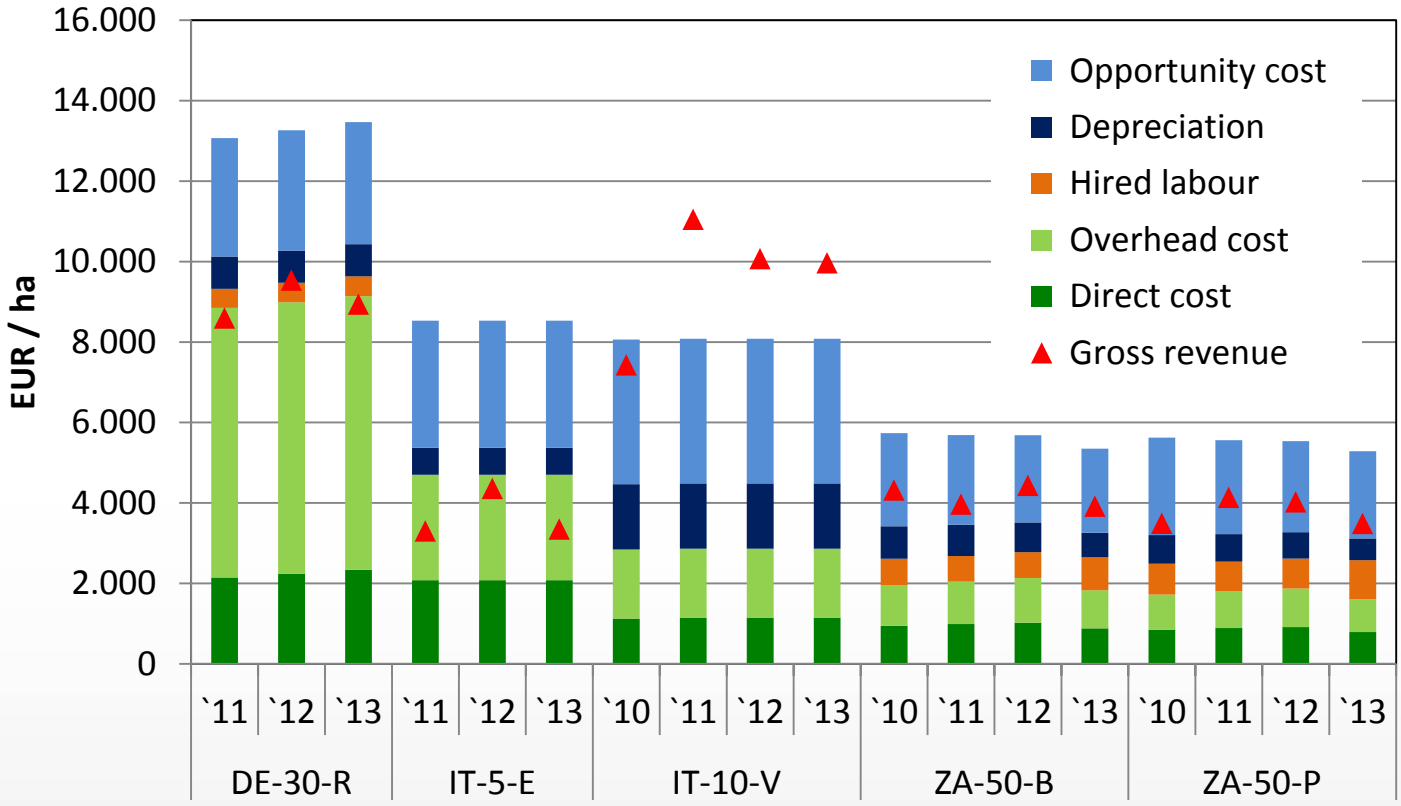
Harvest, Rheinhessen, DE

Manual pruning, Languedoc, FR

Specific inflation factors reported by our partners

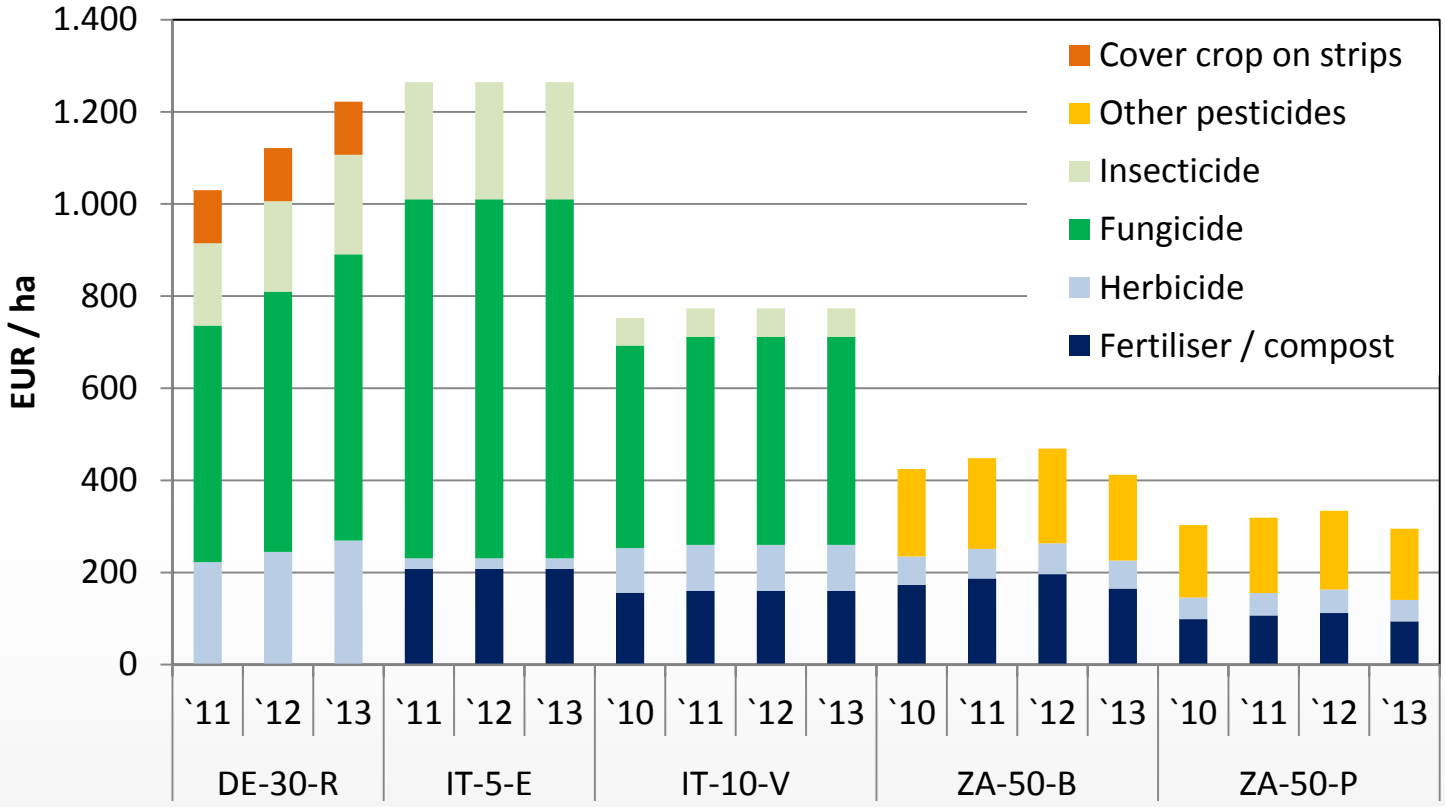
		Germany	South Africa	Italy
Pesticides	2011		8 %	2.7 %
	2012	10 %	9.4 %	
	2013	10 %	10 %	
Labour	2012	2 %	5.4 %	
	2013	2 %	Seasonal: 75 % Regular: 51 %	
Fertiliser	2011		12.3 %	2.7 %
	2012		10 %	
	2013		2 %	
Fuel	2011		30.3 %	
	2012		13.36 %	
	2013		7 %	
Electricity	2011		25 %	
	2012		25 %	
“Overheads”	2012	2 %	5.4 %	
	2013	2 %	3 %	

Total costs and revenues over time, 2010 - 2013



- Costs on similar level → lack of detailedness of the data update
- Differences in revenues over time are visible → effect of both production volume and market price

Costs for fertiliser and pesticides, 2010-2013



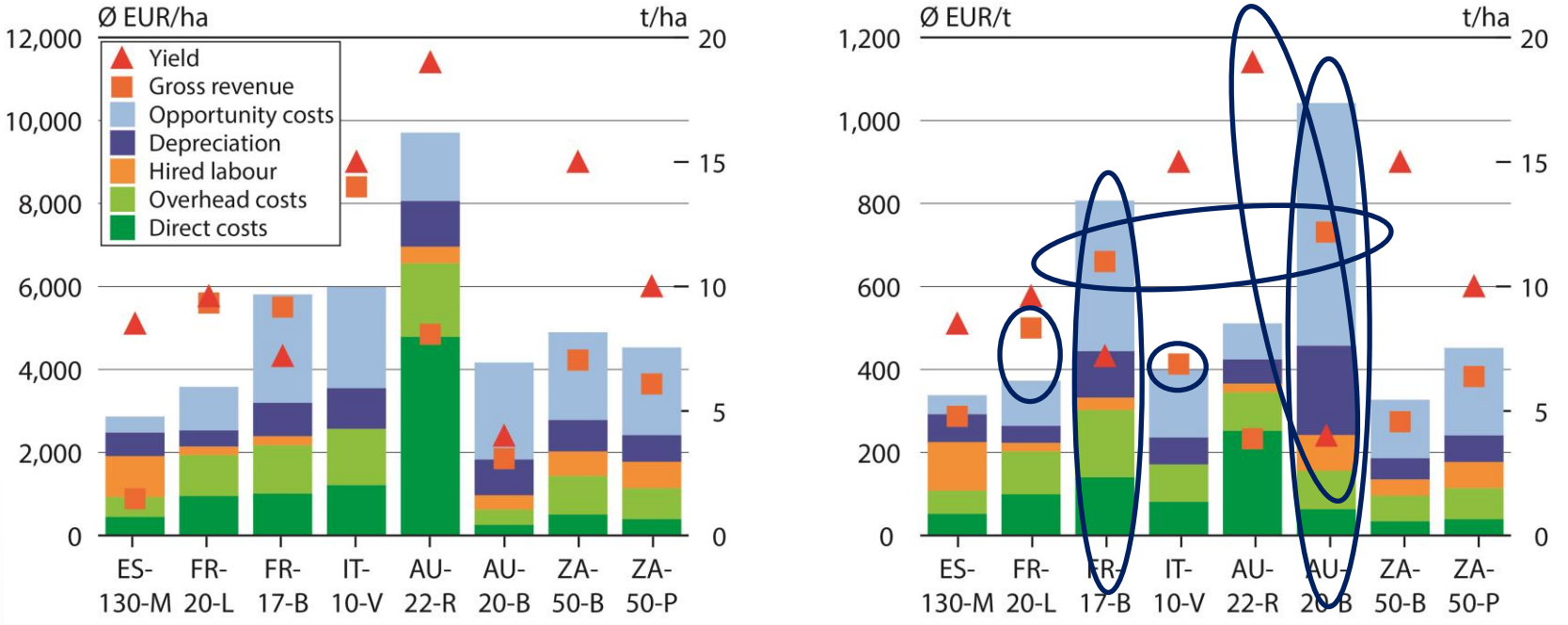
- Other pesticides (FR, ZA): Sum of herbicides, fungicides and insecticides since different pesticides could not be distinguished

Impact of exchange rate

National currency = ... EUR					
Country and Currency		2010	2011	2012	2013
European Union	EUR	1	1	1	1
Australia	AUD	0.6921	0.7417	0.8054	0.7287
Chile	CLP	0.0015	0.0015	0.0016	0.0015
Switzerland	CHF		0.8123	0.8296	0.8122
South Africa	ZAR	0.1032	0.0993	0.0948	0.0781

21 % difference!

Profitability of Cabernet Sauvignon, 2011



- Only full-bearing vines considered
- Yields 4 – 19 t/ha → enormous yield difference in AU
- Market revenue: 230 – 730 EUR/t → highest revenue in AU Barossa valley + Bordeaux
- Highest costs per tonne: AU-20-B and FR-17-B
- Highest calculated profit: FR-20-L and IT-10-V

Future for wine network - Things in the pipeline

- **Australia**
  - Follow-up on contacts of visit during August 2014
  - Revise and update typical farms in Riverlands and Barossa
- **France**
  - Try to find additional partner (in addition to SubAgro)
  - Master thesis Inken Petersen (?)
- **Germany**
  - Andrea Bender, Master thesis:
  - Establish additional farms to assess the economic impact of weather extremes on wine grape farms
- **Include new countries such as: Argentina, Chile, Portugal, USA, (China)**

Thanks a lot for your attention !!!

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Thanks to the *agri benchmark* partners in

Germany
France
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Spain
Australia
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