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# Stakeholders opinions and scientific evidences: how to combine them?

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Presented at: BioFach Congress 2009, BioFach, Nürnberg, February 19-22, 2009



SIXTH FRAMEWORK PROGRAMME



# Why high attention to stakeholders involvement?

- Existing sector, with its economic weight
- Wine is the “most regulated” product in EU
- Wine involves all Euand non-EU countries



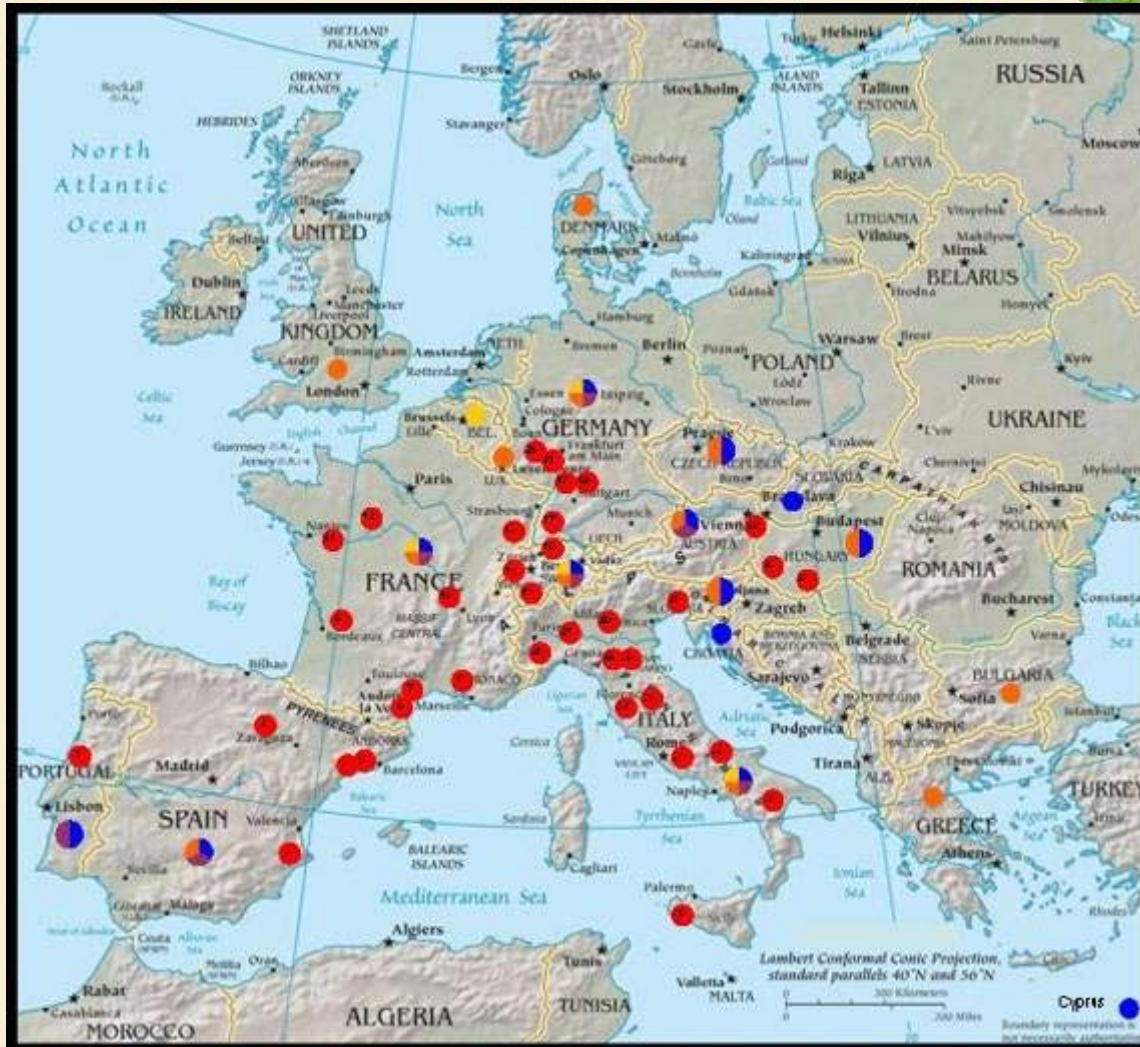
## Which stakeholders we involved?

- producers (organic and conventional)
- consumers (organic and wine *conosseurs*)
- traders
- Wine “policy makers”



# Tools used for stakeholders opinion monitoring

- producers survey (web-based in 2006 + direct interviews and 2008)
- consumers survey (focus groups)
- market study (interviews)
- meetings (national and international)



**Legend:**

- 36 Pilot wineries
- consumer, market- or producer survey
- Stakeholder-meetings
- EPAC members (European Project Advisory Committee)
- ORWINE Partners

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## What do consumers require from organic wine regulation?

- no additives and processing aids which have a negative impact on human health
- no additives which can “affect” authenticity
- lower maximum thresholds for critical substances (sulphites) than in conventional wine processing



## What do market actors require from organic wine regulation?

- Clear difference “explainable to consumers” from conventional wine, not only “different grape”
- High quality



## First of all... what are we talking about:

Important export  
within EU  
and outside

- » Italy 34.000 ha
- » France 19.000 ha
- » Spain 16.000 ha

- » Germany 2.800 ha
- » Austria 2.500 ha

Mainly  
domestic market

data from 2006





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# Stakeholders requirements/opinions must be considered together with scientific evidences

**From WP3:** several techniques/additives demonstrate that it is possible to lower SO<sub>2</sub> use at least in main wine categories without negatively affecting wine quality



## PILOT FARM TRIALS

- 30 wineries, 2+1 years, 9 EU countries,  
(P, E, F, I, CH, A, D, HU, GR)
- AIM: not to obtain scientific data, but to verify in commercial wineries that the procedure proposed is effective and doesn't cause economical or practical problems when implemented in a small-medium facility
- “ORWINE protocols” in comparison with winemaking procedure in use in the winery



## PILOT FARM TRIALS

### Main conclusions

- **SO<sub>2</sub> reduction in final wines: up to 10% of the wine produced following in-house procedure (sometimes increase)**
- **all final wines with less than 50% of the legal limit for SO<sub>2</sub>**
- **No negative impact on volatile acidity and main chemical parameters**
- **Occasionally, increase of acetaldehyde (sample management?)**
- **Sensory evaluation: significant differences, preferences not significant**



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## Technical part summary of conclusions

**“It is technically possible to consistently produce quality wines by using 50% of the SO<sub>2</sub> allowed by EU wine law, without increased use of other additives, mainly through prevention, coherent procedures and physical treatments”**



# Producers involvement

## 1° and 2° round

- **producer's survey (2006) web and interviews**
- **1<sup>st</sup> EPAC meeting (Stuttgart 2007)**
- **Experts Interviews (2008)**
- **2<sup>nd</sup> EPAC meeting (Venice 2008)**
  - **Yearly national meetings (at least 4 per country and per year)**



## producers involvement - 3° round

- **web stakeholder survey** (nov 08)

**Total answers 992 (about 25% of EU organic wine producers)**

**Italy 247**

**Germany 347**

**Austria 54**

**France 233**

**Switzerland 35**

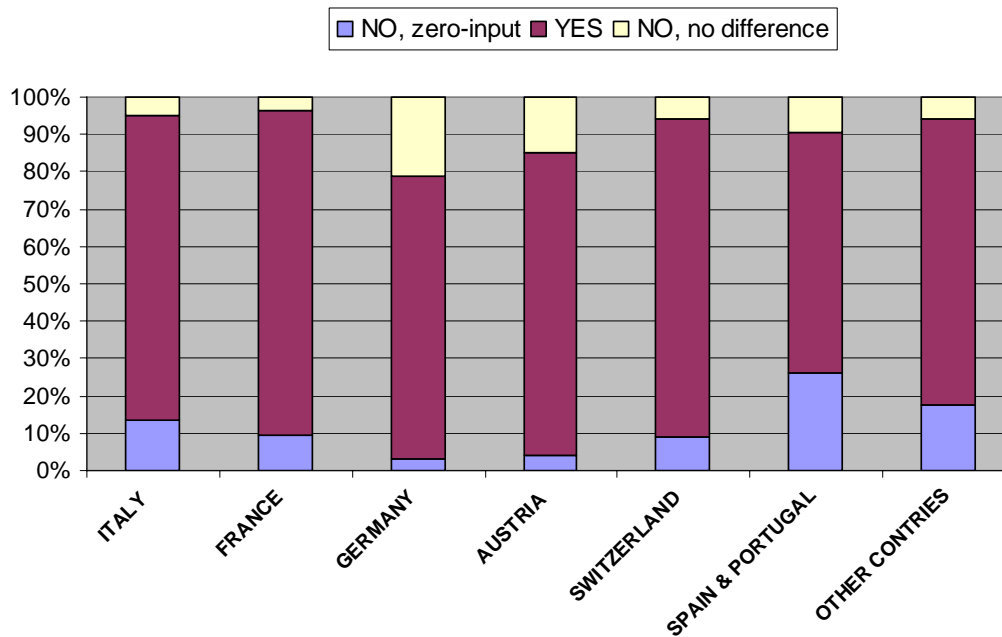
**Spain & Portugal 51**

**Other countries 25**



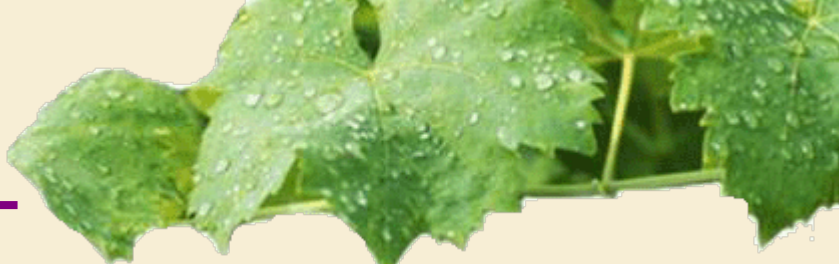
## Last producers survey

Do you agree on the principle of limiting the use of certain additives and/or practices in organic winemaking ?



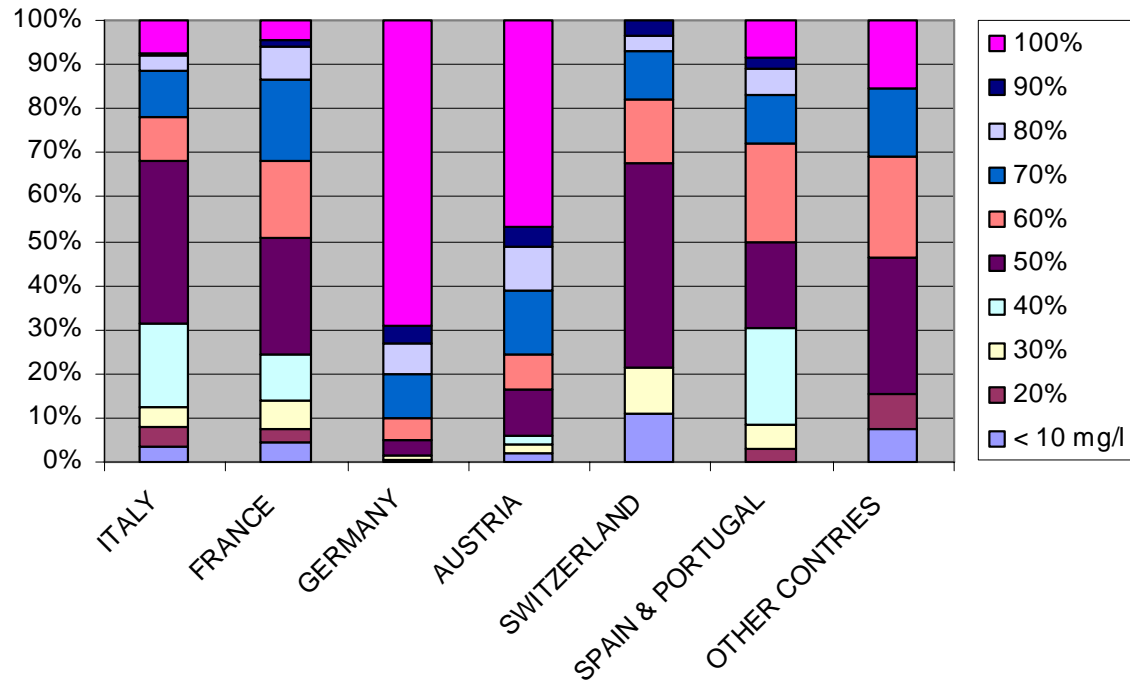
*Most stakeholders agree with the principle of limiting additives/practices for organic wine.*

*In several countries significant percentage in favour of a Zero-input approach*



## Producers survey - SO<sub>2</sub>

**PROPOSED SO<sub>2</sub> LIMIT FOR ORGANIC WINES**  
 (% amount allowed in conventional wines)  
**DRY WHITE WINES - NOWADAYS**



**SO<sub>2</sub>**  
**White Wines**

*I, F, E, P, CH, other*  
 → majority for  
 reduction at 105  
 ppm (50%)

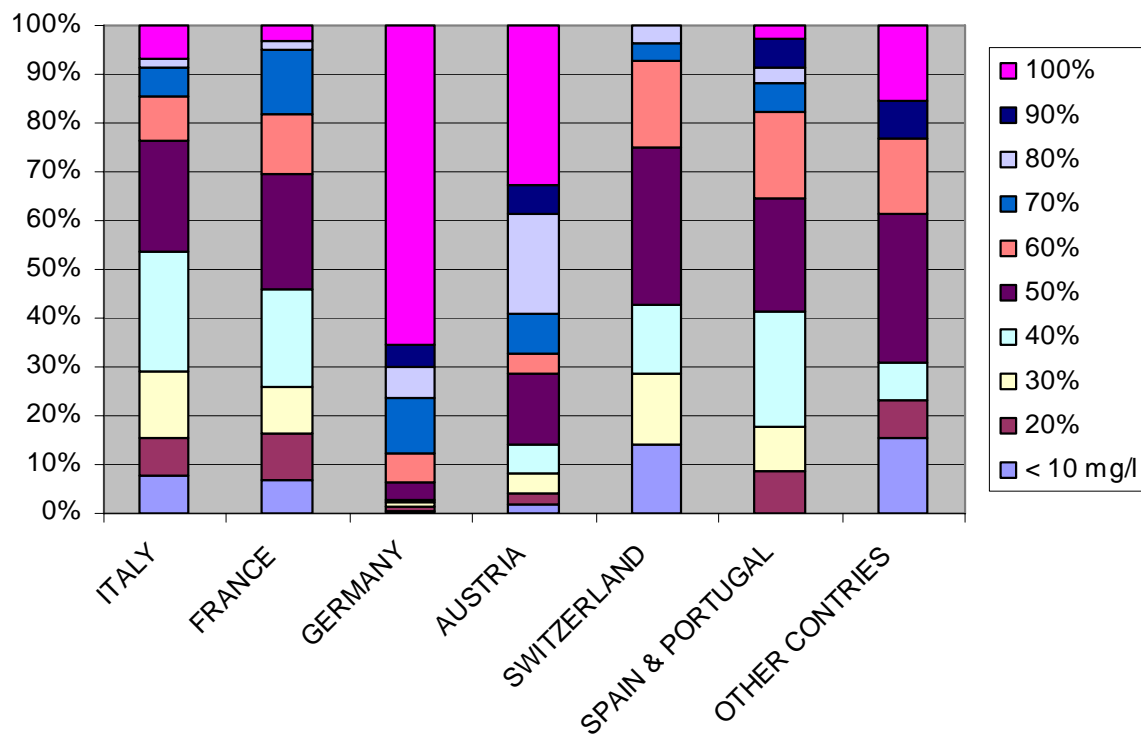
*D, A*  
 → No SO<sub>2</sub> limits





## SO<sub>2</sub> White Wines Step-wise 5 years

**PROPOSED SO<sub>2</sub> LIMIT FOR ORGANIC WINES**  
(% amount allowed in conventional wines)  
**DRY WHITE WINES - IN 5 YEARS**



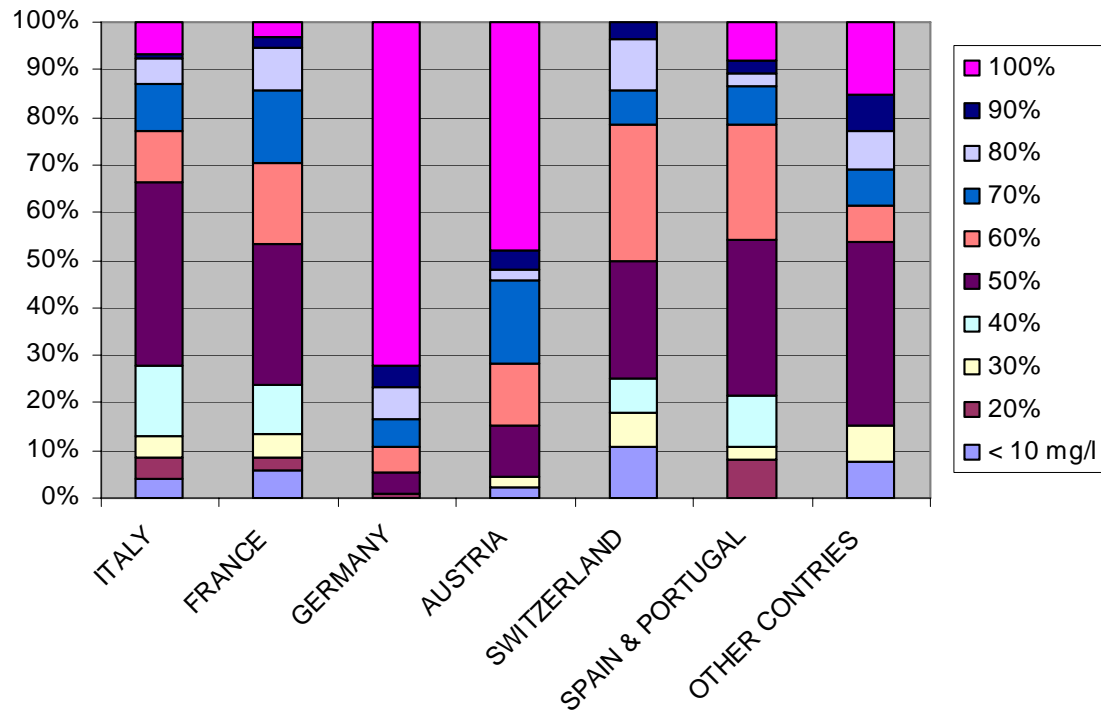
*I, F, E, P, CH, other*  
→ 60-75 % for  
reduction at 105  
ppm (50%)

→ *Essentially no  
variation in  
position*



## SO<sub>2</sub> Red Wines

**PROPOSED SO<sub>2</sub> LIMIT FOR ORGANIC WINES**  
(% amount allowed in conventional wines)  
**DRY RED WINES - NOWADAYS**



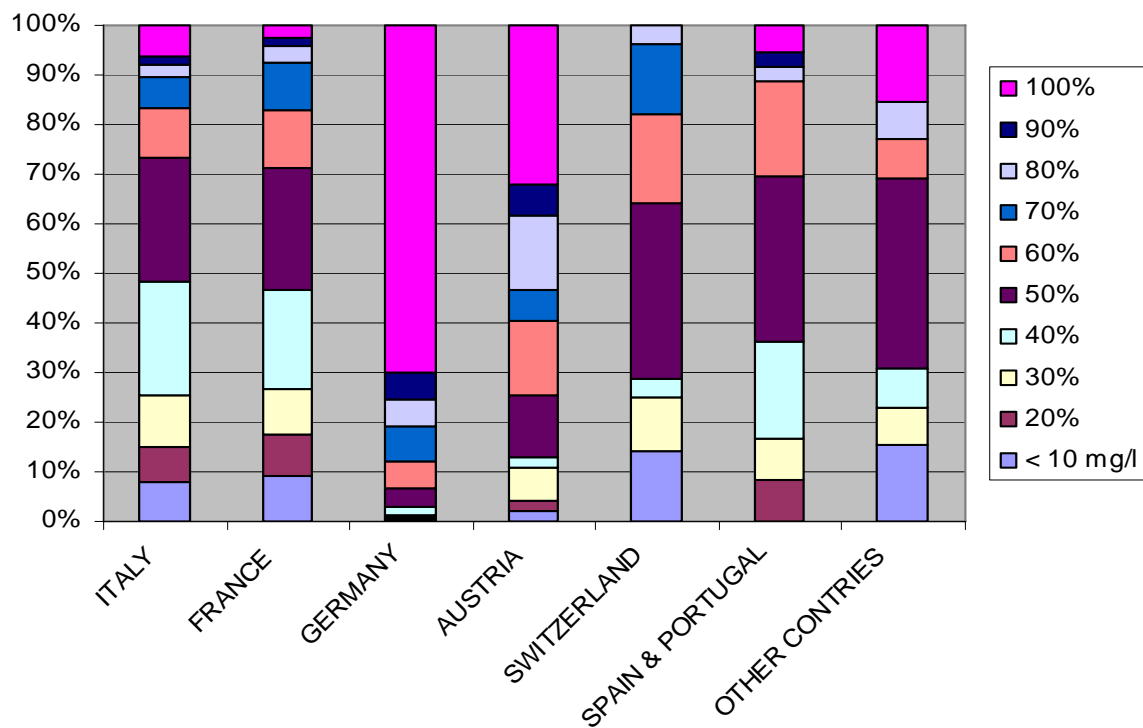
*I, F, E, P, CH, other*  
→ majority for  
reduction at 105  
ppm (50%)

→ No SO<sub>2</sub> limits



## SO<sub>2</sub> Red Wines Step-wise 5 years

**PROPOSED SO<sub>2</sub> LIMIT FOR ORGANIC WINES**  
(% amount allowed in conventional wines)  
**DRY RED WINES - IN 5 YEARS**



*I, F, E, P, CH, other*  
→ 65-70 % for  
reduction at 80  
ppm (50%)

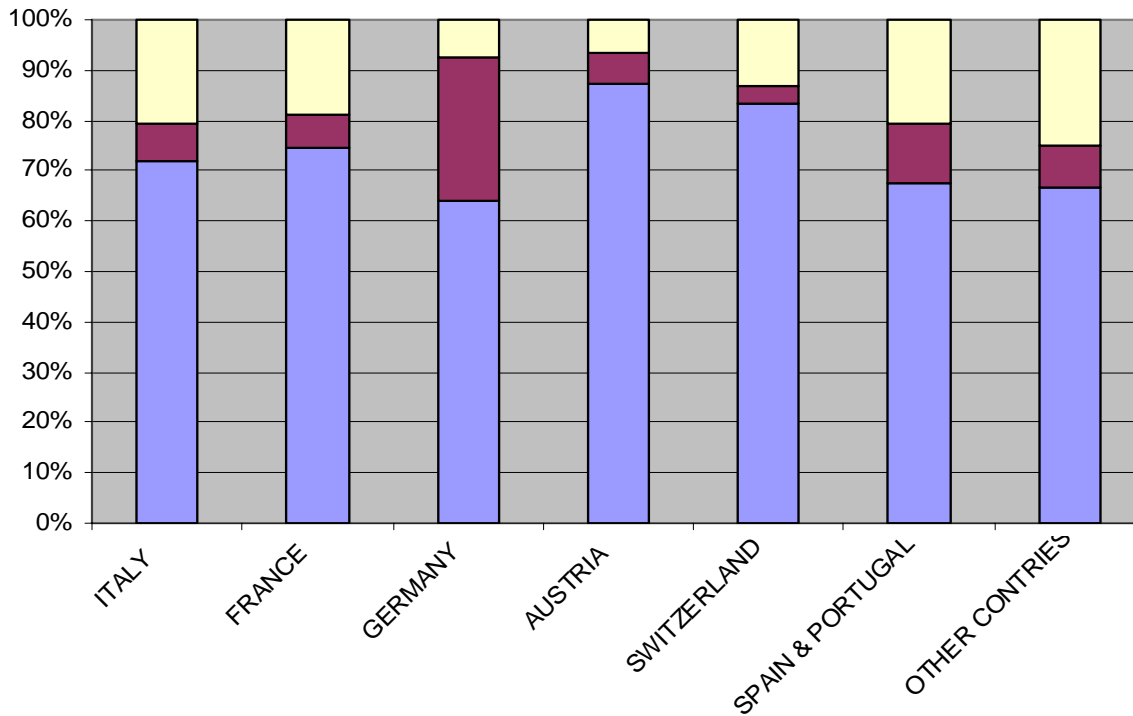
→ Essentially no  
variation in the  
position



***Proposal: no SO2 limits but content on the label***

**Proposal: NO SO2 limits, but content on label**

I disagree  
  I don't know  
  I agree



***General disagreement***



Scenario: 50 % SO<sub>2</sub> limit.

How many wines would be presently above limits ?

(chemical analysis on entries of competition for organic wines in I, F, D, 2006 and 2007 - not including special wines)

Residual Sugars	< 5 g/L						> 5 g/L					
	White			Red			White			Red		
Wine Type												
CMO Limit * (mg/L)	210			160			260			210		
<b>Limit with a 50 % reduction</b>	<b>105</b>			<b>80</b>			<b>130</b>			<b>105</b>		
	N.	H.	%	N.	H.	%	N.	H.	%	N.	H.	%
France	46	2	96	211	18	91	20	4	80	6	0	100
Italy	111	19	83	298	34	89	24	1	96	35	4	89
Germany	13	3	77	21	7	67	31	6	81	5	0	100
Austria	21	5	76	18	5	72	11	1	91	2	1	50
Switzerland	2	0	100	9	0	100	1	0	100	1	0	100
Spain	3	0	100	23	6	74	1	0	100	1	0	100
<b>TOTAL</b>	<b>196</b>	<b>29</b>	<b>85</b>	<b>580</b>	<b>70</b>	<b>88</b>	<b>88</b>	<b>12</b>	<b>86</b>	<b>50</b>	<b>5</b>	<b>90</b>

\* EU Reg. 1493/99

N. Total number of samples

H. Number of samples with SO<sub>2</sub> higher than the reduced limit

% Percentage of samples below the reduced limit



## Additives and processing aids

- ***allowed in wine*** by Reg. (CE) 1493/1999, 1622/2000, 479/2008 and ***allowed for organic foods*** by Annex VI of EC Reg. 2092/91
- ***allowed in wine*** by Reg. (CE) 1493/1999, 1622/2000, 479/2008 ***not allowed for organic foods*** by Annex VI of EC Reg. 2092/91 ***widely accepted by private standards***
- ***allowed in wine*** by Reg. (CE) 1493/1999, 1622/2000, 479/2008 and ***not allowed for organic foods*** by Annex VI of EC Reg. 2092/91 ***Not mentioned or forbidden by private standards***



## Additives and processing aids

- allowed in wine by Reg. (CE) 1493/1999, 1622/2000, 479/2008 and allowed for organic foods by Annex VI of EC Reg. 2092/91

NOT to be admitted	SPAIN						
	ITALY	FRANCE	GERMANY	AUSTRIA	SWITZER LAND	& PORTUGAL	OTHER CONTRIES
Gaseous SO <sub>2</sub>	143	162	254	40	25	31	10
Potassium Metabisulfite	13%	14%	0%	5%	16%	10%	10%
Selected active dry yeast	13%	32%	7%	20%	28%	6%	20%
Selected lactic bacteria	17%	28%	2%	15%	4%	16%	10%
Pectolitic enzymes	28%	39%	4%	15%	12%	26%	20%
Betaglucanases enzymes	28%	37%	7%	30%	24%	26%	40%
Ascorbic acid (250 mg/l)	38%	44%	13%	45%	32%	39%	60%
Arabic gum	27%	43%	13%	28%	24%	23%	10%
K- Alginates	34%	40%	14%	40%	28%	16%	40%
Egg-white (ovoalbumine)	35%	44%	9%	26%	18%	24%	40%
Lactalbumin	17%	17%	8%	15%	12%	23%	10%
Casein	33%	43%	12%	23%	20%	32%	30%
K-caseinate	26%	30%	7%	18%	16%	29%	10%
Isinglass	33%	44%	6%	18%	24%	23%	30%
Gelatin	28%	32%	5%	20%	32%	23%	30%
K-bitartrate	28%	43%	5%	20%	16%	19%	10%
K-bicarbonate	25%	36%	4%	18%	12%	19%	20%
Ca-carbonate	23%	39%	3%	15%	4%	19%	10%
Tartaric acid	22%	37%	2%	10%	4%	19%	0%
Citric acid (1g/l)	13%	36%	5%	20%	8%	10%	10%
Bentonite	17%	40%	6%	33%	20%	16%	20%
Kaolin	4%	11%	1%	8%	0%	0%	10%
Charcoal	27%	25%	6%	18%	24%	10%	20%
Silicon dioxide	27%	41%	0%	10%	0%	23%	10%
Diathomeus earth	28%	33%	2%	15%	8%	16%	10%
Perlite	20%	15%	0%	8%	4%	23%	10%
Cellulose	27%	27%	1%	18%	4%	19%	20%
Wood tannins	23%	22%	1%	13%	4%	10%	20%
Grape tannins	36%	51%	17%	45%	24%	26%	50%
	24%	40%	11%	38%	12%	19%	20%

**General acceptance**

**In some countries doubts on**

- Beta-glucanase enzymes
- Wood tannins



## Additives and processing aids

- **allowed in wine** by Reg. (CE) 1493/1999, 1622/2000, 479/2008
- **not allowed for organic foods** by Annex VI of EC Reg. 2092/91
- **widely accepted by private standards**

<i>NOT to be admitted</i>	ITALY	FRANCE	GERMANY	AUSTRIA	SWITZER LAND	SPAIN & PORTUGAL	OTHER CONTRIES
<i>answers</i>	143	162	254	40	25	31	10
Thiamine hydrochloride (0,6 mg/l )	37%	39%	6%	33%	44%	35%	20%
Di-Ammonium-phosphate (1 g/hl)	37%	36%	6%	33%	32%	39%	20%
Ammonium sulphate (1 g/hl)	36%	32%	5%	38%	40%	35%	40%
Di-ammonium sulphite (0,2 g/l)	44%	39%	7%	35%	24%	35%	50%
Yeasts cells walls (40 g/hl)	26%	31%	3%	20%	8%	26%	30%
Metartaric acid (in wine,100 mg/l)	29%	43%	13%	28%	16%	42%	30%
Copper sulphate (in wine, 1 g/hl / 1 mg/l)	32%	39%	7%	23%	32%	32%	10%
Aleppo pine resin	33%	36%	19%	40%	16%	48%	40%

**General acceptance**

**In some countries doubts on ammonium sulphite**





## Additives and processing aids

- allowed in wine by Reg. (CE) 1493/1999, 1622/2000, 479/2008 and not allowed for organic foods by Annex VI of EC Reg. 2092/91**  
**Not mentioned or forbidden by private standards**

<i>NOT to be admitted</i>		ITALY	FRANCE	GERMANY	AUSTRIA	SWITZERLAND	SPAIN & PORTUGAL	OTHER CONTRIES
	<i>answers</i>	143	162	254	40	25	31	10
Sorbic acid		56%	62%	59%	65%	44%	45%	40%
Potassium sorbate		59%	64%	42%	55%	48%	48%	30%
Potassium ferrocyanide		73%	78%	58%	60%	64%	52%	70%
Dimethyl dicarbonate		68%	65%	39%	53%	60%	52%	50%
Calcium phytate (in wine, 8 g/hl)		57%	65%	31%	53%	44%	39%	50%
Calcium tartrate (in wine, 200 g/hl)		44%	56%	15%	33%	32%	45%	20%
Copper citrate (20 g/hl)		52%	61%	27%	38%	40%	45%	40%
PVPP (80 g/hl)		52%	59%	40%	50%	56%	32%	50%
Lysozyme (500 mg/l)		44%	54%	38%	55%	44%	39%	40%
Plants proteins		36%	46%	15%	40%	20%	32%	20%
Yeast mannoproteins		38%	49%	18%	45%	28%	35%	50%
Wooden chips, cubes and staves		42%	59%	25%	50%	48%	42%	30%

**Generally NOT accepted:**

**sorbate, K-ferrocyanide, DMDC, Ca-Phytate, PVPP**

**Doubts in some countries on:**

**Lysozyme, Wooden chips**



## Practices

- **allowed in wine by Reg. (CE) 1493/1999, 1622/2000, 479/2008**

<i>NOT to be admitted</i>		ITALY	FRANCE	GERMANY	AUSTRIA	SWITZERLAND	SPAIN & PORTUGAL	OTHER COUNTRIES
	<i>answers</i>	143	162	254	40	25	31	10
Aeration		2%	1%	1%	0%	0%	6%	0%
Oxygen addition		14%	7%	4%	13%	4%	3%	10%
Use of inert gases (CO2, nitrogen, argon)		8%	3%	6%	8%	0%	6%	0%
Thermal treatments		20%	16%	5%	10%	12%	16%	20%
Centrifugation / Flotation		17%	27%	2%	15%	0%	23%	20%
Filtration		6%	5%	0%	0%	4%	3%	0%
Electrodialysis (wines)		47%	41%	35%	48%	40%	35%	30%
Reversal Osmosis (musts)		36%	43%	34%	55%	36%	29%	40%
Evaporation (musts)		33%	35%	22%	43%	16%	26%	30%

***Doubts in some countries on:  
Reversal Osmosis, Electrodialysis***



## Practices

- **NOT (yet) allowed in wine** by Reg. (CE) 1493/1999, 1622/2000, 479/2008, but positively evaluated by OIV and used in non-EU countries

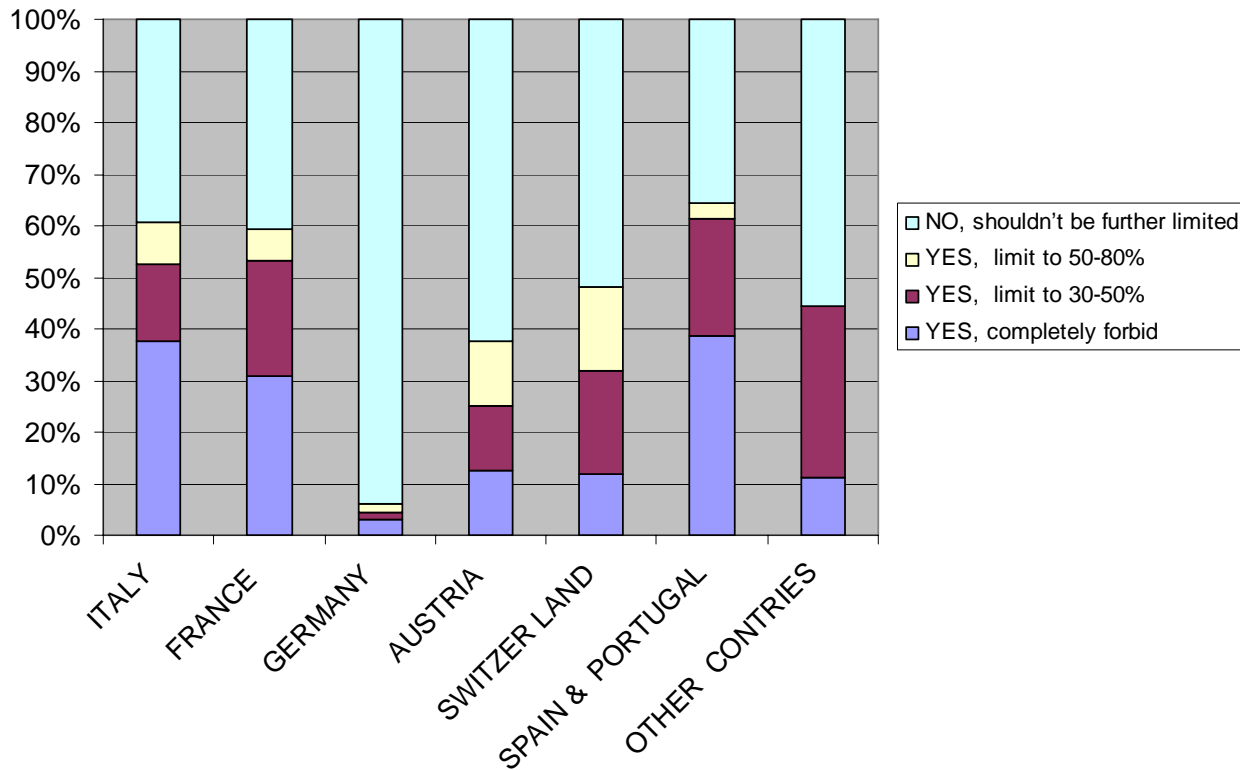
	ITALY	FRANCE	GERMANY	AUSTRIA	SWITZER LAND	SPAIN & PORTUGAL	OTHER CONTRIES
<i>NOT to be admitted</i>							
<i>answers</i>	143	162	254	40	25	31	10
Acidification of musts and wines with lactic acid (max. 4 g/l)	48%	63%	40%	68%	40%	52%	20%
Acidification of musts and wines with malic acid (max. 4 g/l)	49%	61%	36%	60%	48%	52%	30%
Tartaric stabilization through carboxy-methyl cellulose	56%	65%	40%	63%	56%	65%	40%
Addition of oleic acid to musts as antifoam agent	70%	73%	69%	85%	76%	61%	60%
Use of exchanging resins to modify wine and must pH	65%	65%	61%	70%	64%	58%	60%
Ultra- and nano-filtration of wines	50%	57%	45%	65%	56%	39%	40%
Spinning Cone column to reduce wine alcohol degree	56%	65%	72%	83%	64%	61%	50%

***In general not accepted:***

***Lactic and malic acid, CMC, oleic acid, exchanging resins, ultra-and nano-filtration, spinning cone***



## Do you want to limit enrichment ?



## ENRICHMENT

*I, F, E, P*  
 → **Limit to 50%**  
 1,5° zone A  
 1,0° zone B  
 0,75° zone C

*D, A, CH, Other*  
 → **No limits**



## Enrichment, through which means ?

	ITALY	FRANCE	GERMANY	AUSTRIA	SWITZER LAND	SPAIN & PORTUGAL	OTHER CONTRIES
<i>answers</i>	73	80	164	31	14	17	9
Addition of organic sucrose from sugar beet or cane	51%	31%	13%	10%	64%	47%	13%
Addition of organic concentrated must	33%	39%	38%	19%	29%	29%	0%
Addition of organic rectified concentrated must	33%	35%	41%	29%	36%	24%	25%
Reversal Osmosis of must	51%	51%	65%	58%	21%	47%	75%
Evaporation of must	45%	54%	65%	65%	36%	47%	50%
Cryo-concentration of must	40%	54%	70%	71%	36%	47%	63%
Cryo-concentration of wine	52%	63%	74%	84%	43%	41%	50%

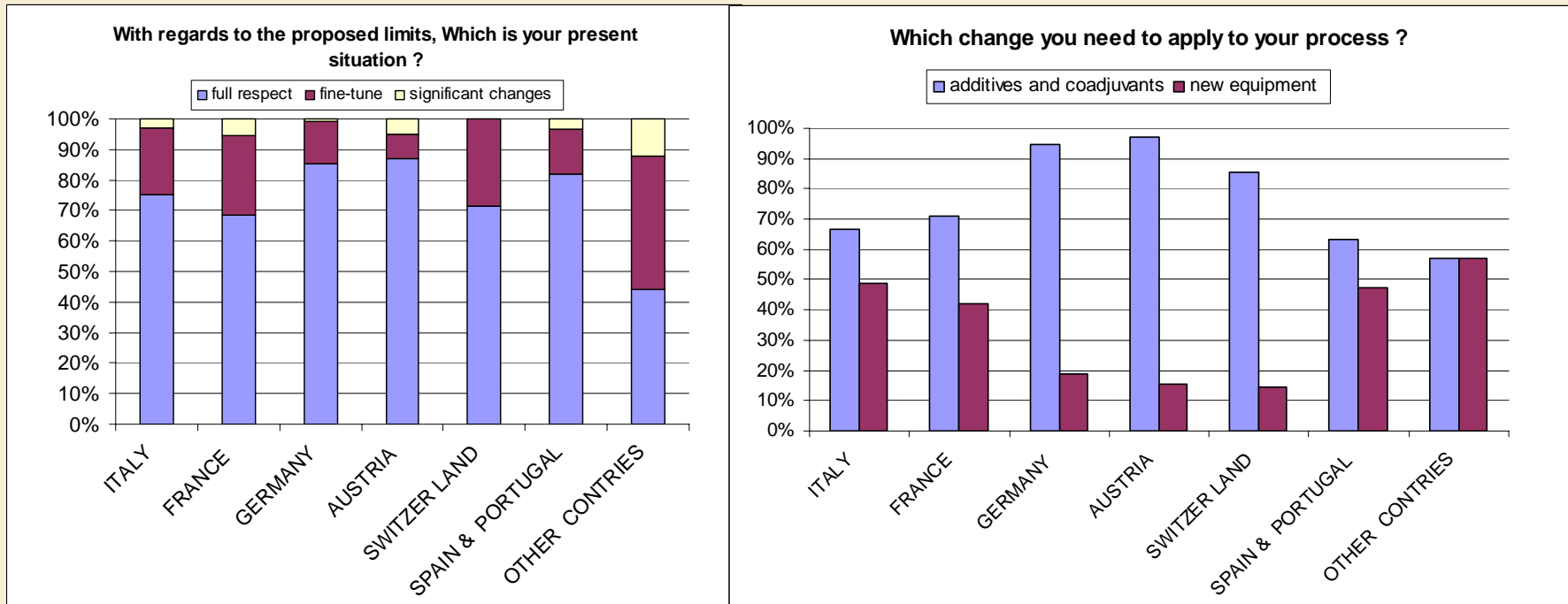
**Generally accepted: organic must and concentrated must**

**Not accepted in I, CH, E, P: *Sucrose***

**Generally not accepted: *physical treatment of wine and musts***



## Are producers ready for the new EU regulation ?



**Producers (> 70%) are already respecting the proposed limits  
Stricter rules will mainly deal with a change in additives usage**



## How to combine different positions

- First to consider scientific data
- Regulate mainly “common” wine categories
- Allow derogation system for particularly negative years (as from CMO)



## Information available

at [www.orwine.org](http://www.orwine.org)

reports on:

- consumers study
- producers survey
- market study
- environmental assessment tool explanation
- preliminary results of oenological studies
- protocols applied in pilot farms (+pilot farms list)
- decalogue and final key points (+ additives and processing aids fact sheets)





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