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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



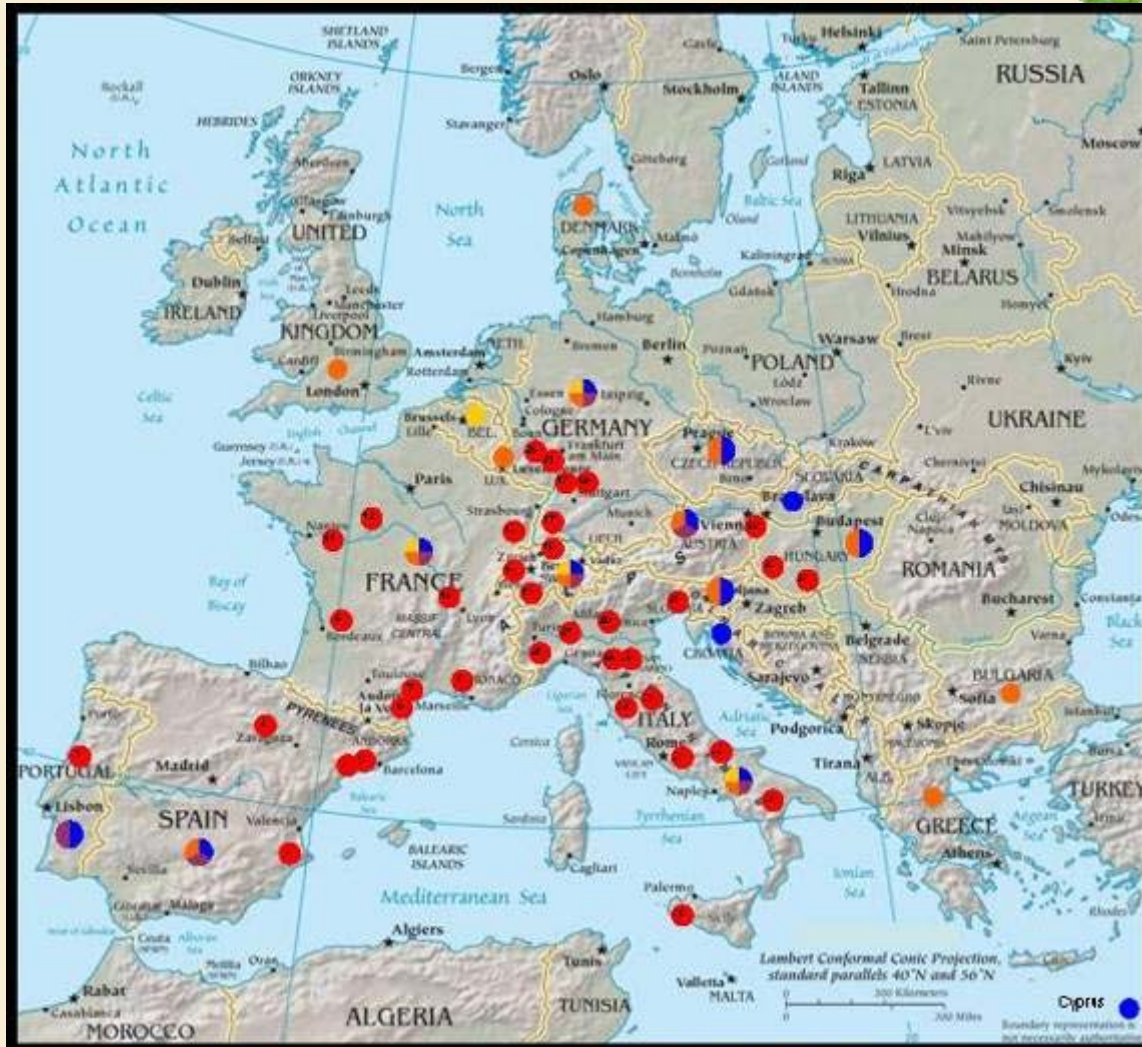
Which stakeholders we involved?

- 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:

-  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



Stakeholders requirements/opinions must be considered together with scientific evidences

From WP3: several techniques/additives demonstrate that it is possible to lower SO₂ 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

- **SO₂ 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 SO₂**
- **No negative impact on volatile acidity and main chemical parameters**
- **Occasionally, increase of acetaldehyde (sample management?)**
- **Sensory evaluation: significant differences, preferences not significant**



Technical part summary of conclusions

“It is technically possible to consistently produce quality wines by using 50% of the SO₂ 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**
- **1st EPAC meeting (Stuttgart 2007)**
- **Experts Interviews (2008)**
- **2nd 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

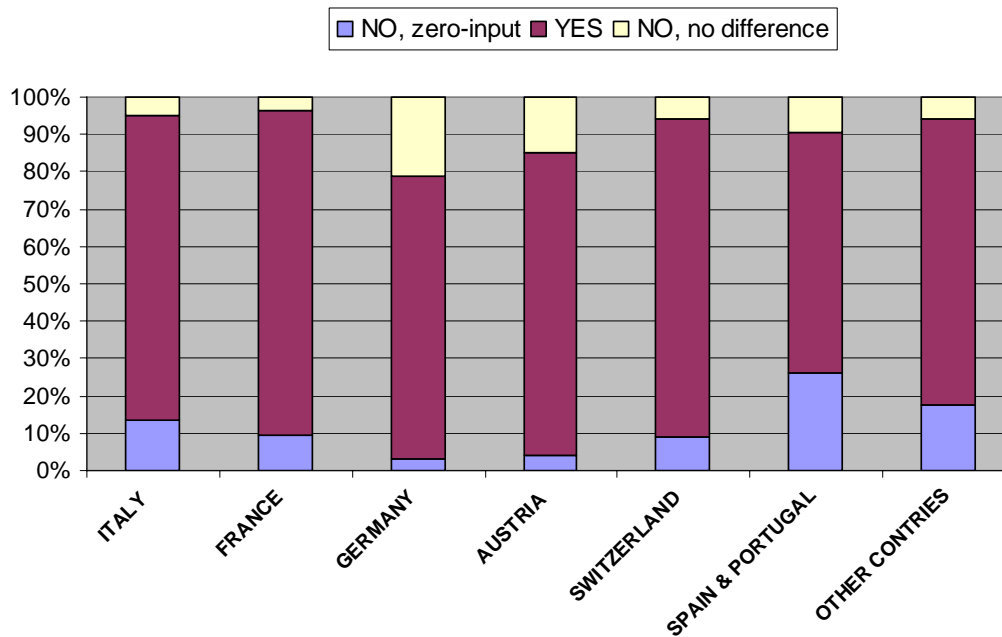
Spain & Portugal 51

Other countries 25



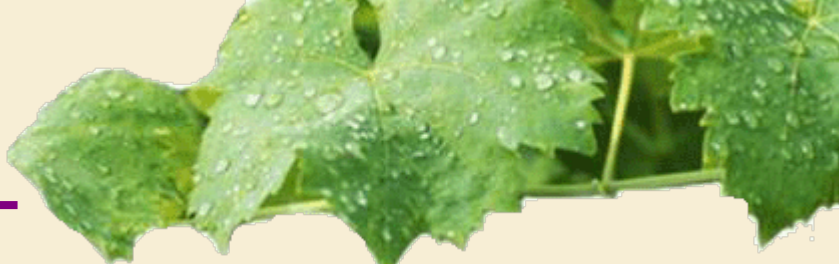
Last producers survey

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



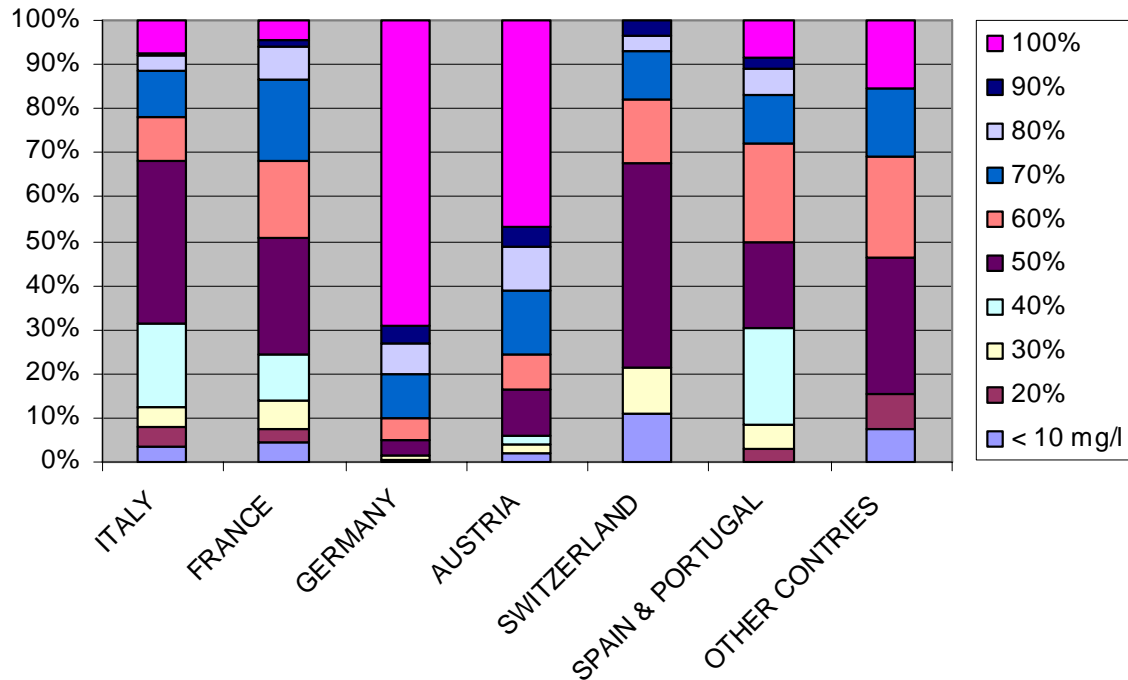
Most stakeholders agree with the principle of limiting additives/practices for organic wine.

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



Producers survey - SO₂

PROPOSED SO₂ LIMIT FOR ORGANIC WINES
 (% amount allowed in conventional wines)
DRY WHITE WINES - NOWADAYS



SO₂
White Wines

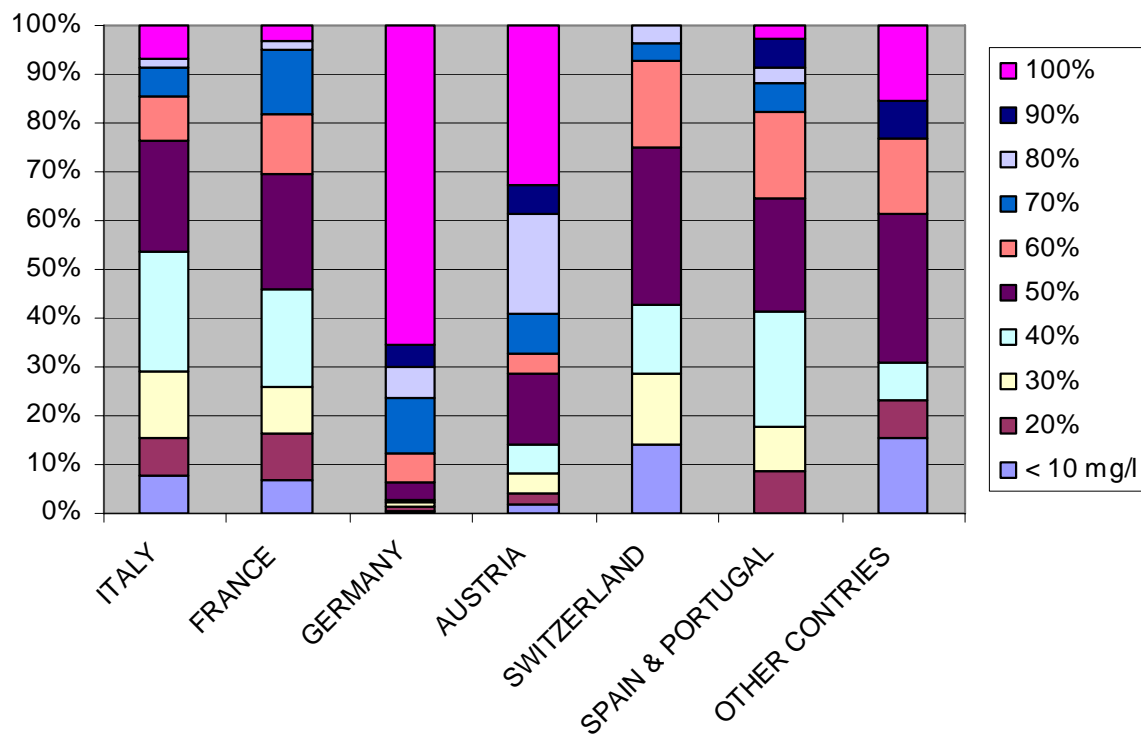
I, F, E, P, CH, other
 → majority for
 reduction at 105
 ppm (50%)

D, A
 → No SO₂ limits



SO₂ White Wines Step-wise 5 years

PROPOSED SO₂ LIMIT FOR ORGANIC WINES
(% amount allowed in conventional wines)
DRY WHITE WINES - IN 5 YEARS



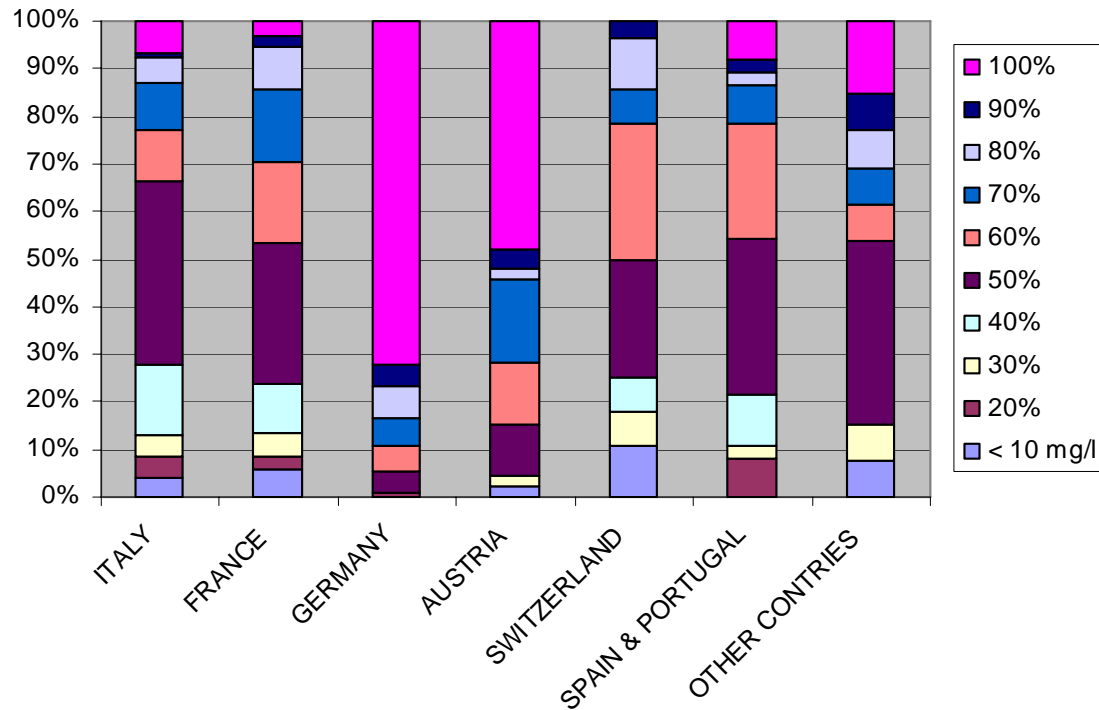
I, F, E, P, CH, other
→ 60-75 % for
reduction at 105
ppm (50%)

→ Essentially no
variation in
position



SO₂ Red Wines

PROPOSED SO₂ LIMIT FOR ORGANIC WINES
(% amount allowed in conventional wines)
DRY RED WINES - NOWADAYS



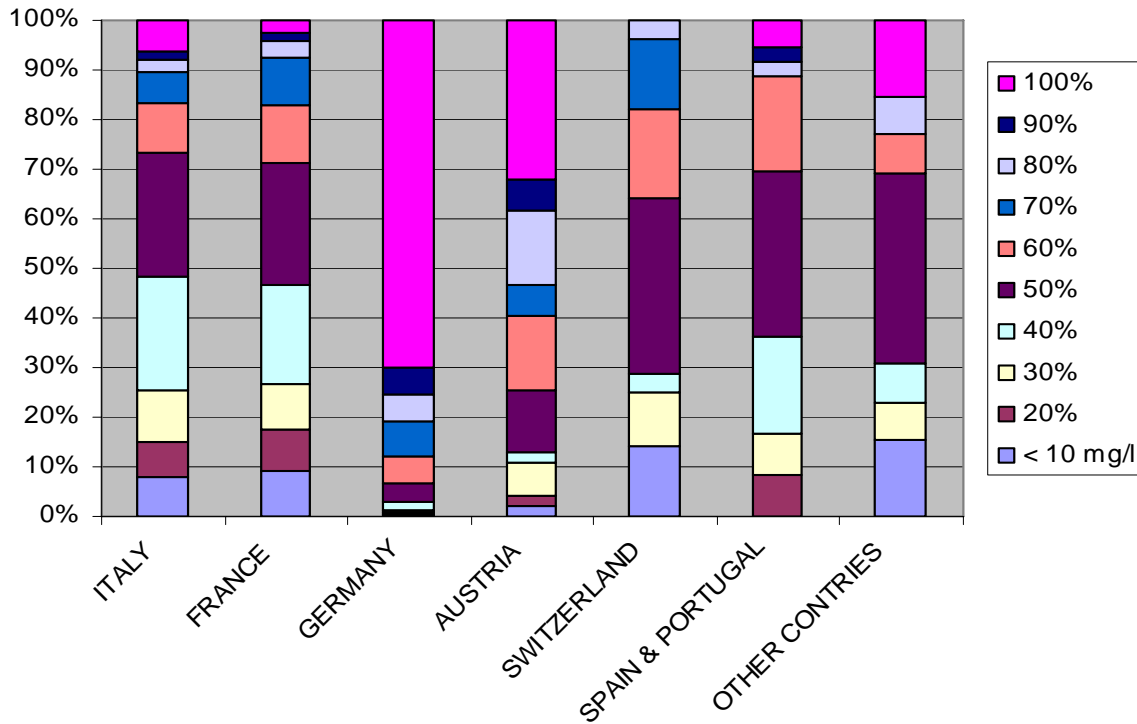
I, F, E, P, CH, other
→ majority for
reduction at 105
ppm (50%)

→ No SO₂ limits



SO₂ Red Wines Step-wise 5 years

PROPOSED SO₂ 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%)

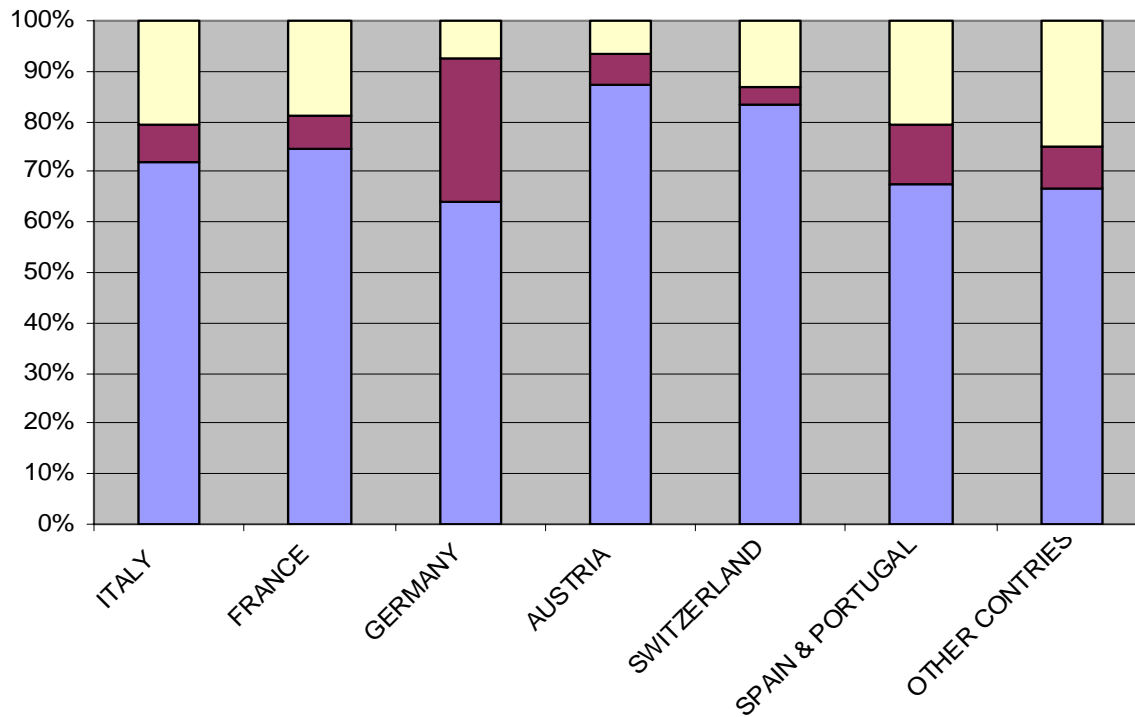
→ Essentially no
variation in the
position



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 % SO₂ 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		
Limit with a 50 % reduction	105			80			130			105		
	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
TOTAL	196	29	85	580	70	88	88	12	86	50	5	90

* EU Reg. 1493/99

N. Total number of samples

H. Number of samples with SO₂ 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

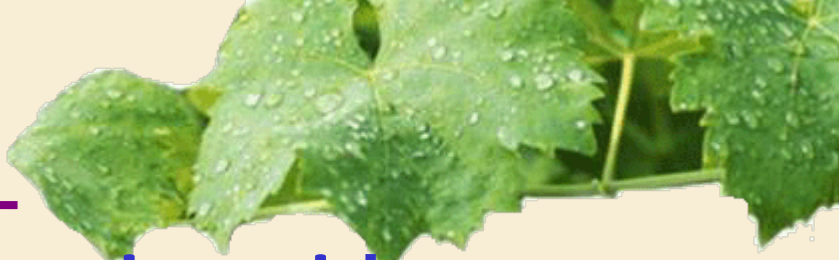
- allowed in wine by Reg. (CE) 1493/1999, 1622/2000, 479/2008 and allowed for organic foods by Annex VI of EC Reg. 2092/91

NOT to be admitted	SPAIN						
	ITALY	FRANCE	GERMANY	AUSTRIA	SWITZER LAND	& PORTUGAL	OTHER CONTRIES
Gaseous SO ₂	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- Alginate	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

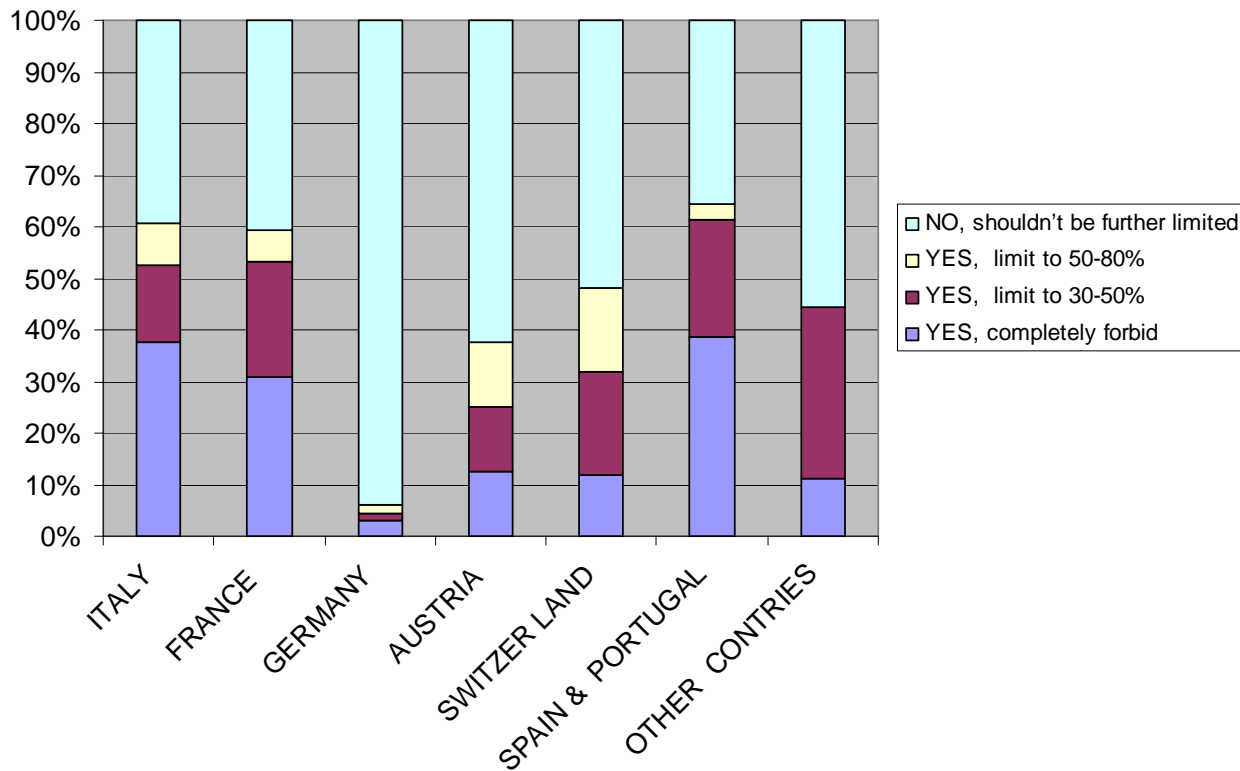
	ITALY	FRANCE	GERMANY	AUSTRIA	SWITZER LAND	SPAIN & PORTUGAL	OTHER CONTRIES
<i>NOT to be admitted</i>							
<i>answers</i>	143	162	254	40	25	31	10
Acidification of musts and wines with lactic acid (max. 4 g/l)	48%	63%	40%	68%	40%	52%	20%
Acidification of musts and wines with malic acid (max. 4 g/l)	49%	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%

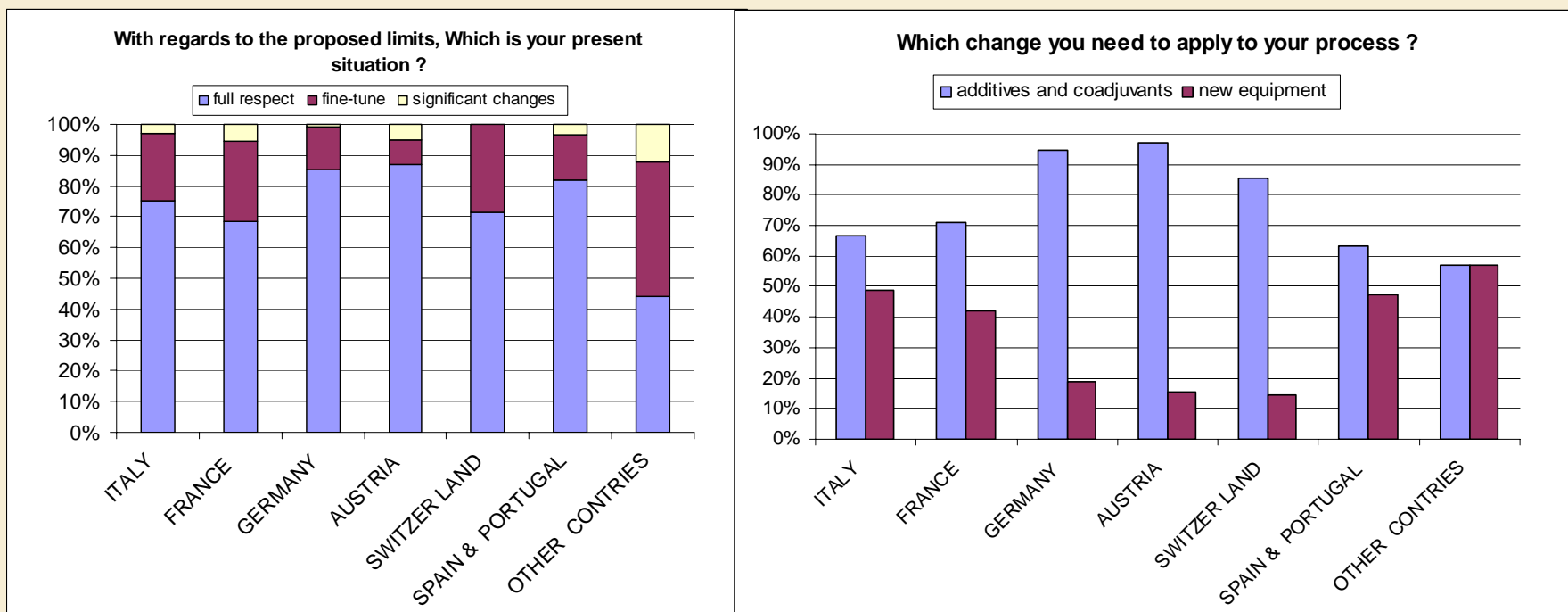
Generally accepted: organic must and concentrated must

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

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)



Acknowledgement

The authors gratefully acknowledge the European Community's financial participation under the Sixth Framework Programme for Research, Technological Development and Demonstration Activities, the Specific Targeted Research Project "ORWINE" SSPE-CT-2006-022769.

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