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ORWINE

ORWINE project contribution to a regulatory proposal on organic wine making

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SIXTH FRAMEWORK PROGRAMME

Biofach - 19th of February 2009

How were built ORWINE proposals ?

Laboratory and pilot-farm experimentations (WP3 & WP4)

Consumers and producers surveys, market study, regulation framework analysis, bibliography.. (WP2)

Expert evaluation (additives and processing aids)

REGULATION PROPOSALS

Code of Good Practices

EPAC Committee

Web Survey

Organic wine samples analysis (WP3)

Stakeholder consultations (3 rounds of discussion)

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Regulatory frame of the proposals

Organic wine making regulated within the organic farming regulation REC 834/07

Outcomes from the previous rounds of discussion

- Regulation on additives (and processing aids) and techniques

- No national or regional adaptation. Whole process, labeling included, regulated at EU level (may be excepted “special wines”)

Content of the presentation

- Additives and processing aids
- SO_2 issue
- Techniques
- Enrichment
- Discussion

The issue of the oenological substances for organic wine making

To avoid substances potentially harmful for the environment and human health

AND

To produce high quality organic wines : every types of wines, every years and in every European wine regions

Oenological substances allowed for organic processing

General evaluation

General positive evaluation for most of these additives

Sulphites negatively considered by consumers, reductions are requested by a majority of countries…

Gelatine negatively considered by consumers

Oenological substances not allowed in organic, but allowed by most of standards

Web survey evaluation

NOT to be admitted	ITALY	FRANCE	GERMANY	AUSTRIA	SWITZERLAND	SPAIN & PORTUGAL	OTHER CONTRIES
answers	*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%

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Oenological substances not allowed in organic, but allowed by most of standards

General evaluation

General positive evaluation for thiamine, copper sulphate, di-ammonium phosphate, yeast ghosts, Aleppo pine resin

Ammonium sulphate increase SO_2 production (WP3)

Metatartaric acid and **di-ammonium sulphite** negatively evaluated by experts

Oenological substances neither allowed in organic, nor by the standards

Web survey evaluation

NOT to be admitted	ITALY	FRANCE	GERMANY	AUSTRIA	SWITZERLAND	SPAIN & PORTUGAL	OTHER CONTRIES
answers	*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%

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Oenological substances neither allowed in organic, nor by the standards

General evaluation

General negative evaluation for sorbic acid, P-ferrocyanide, DMDC, Ca-phytate, PVPP

Lysosyme: controversial (reduction SO2, allergenic)

Positive evaluation for : Ca-tartrate, plants proteins, yeasts mannoproteins, wooden chips

The case of allergenic oenological substances

- **Casein, egg-white** (ovalbumin), **lactalbumin, P-caseinates**, **sulphites** (already allowed in organic)

- **Lysosyme** and **plants proteins** with gluten (still not allowed in organic but useful for wine making)

If allowed for organic wine and labelled: what about healthy image of organic wines ?

If not allowed : which alternatives ?

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Summary of the oenological substances evaluation

	Already allowed for organic processing	*Not allowed in organic but allowed by most of the standards*	*Not allowed in organic and by the majority of standards or not mentioned*	*Still not allowed by European regulation on wines, but will be allowed in the new regulation*
Positive evaluation	All the other	thiamine, copper sulphate, di-ammonium phosphate, yeast ghosts	Ca-tartrate, plants proteins, yeasts mannoproteins, wooden chips, aleppo pine resin	
At least one negative evaluation	SO2 gas, gelatine, P-metabisulphite, casein, egg-white (ovalbumin), lactalbumin, P-caseinates	Ammonium sulphate, di-ammonium sulphite, metatartaric acid	Sorbic acid, P-ferrocyanide, DMDC, Ca-phytate, PVPP lysozyme, plants proteins, ions exchange resins	Malic acid, lactic acid

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SO_2 issue : 3 scenari proposed

Scenario 1: **SO_2 not allowed** in organic wine-making

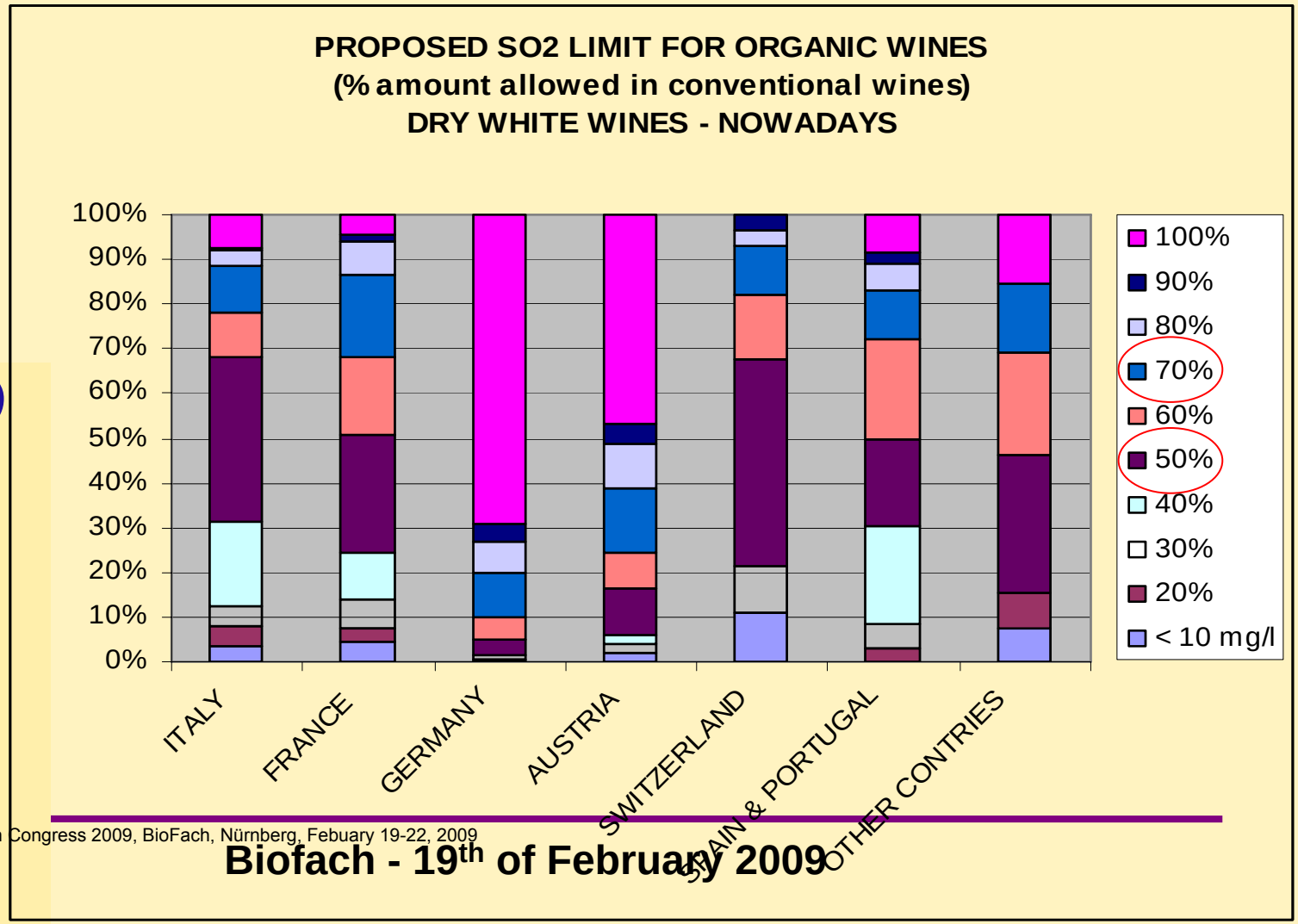
Scenario 2: **no specific limitation on SO_2** (CMO limits for conventional wines)

Scenario 3: a **step-wise limitation of SO_2** use but allowing the sustainable production of high quality wines.

SO_2 issue : 3nd scenario

	Actual CMO	20% reduction Scenario 3.1	30% reduction Scenario 3.2	40% reduction Scenario 3.3	50% reduction Scenario 3.4
Red < 5mg/l sugar	160	128	112	96	80
White < 5mg/l sugar	210	168	147	126	105
Red > 5mg/l sugar	210	168	147	126	105
White and rosè > 5mg/l sugar	260	208	182	156	130

SO_2 issue : web survey



100% (210 mg/l)
90% (189 mg/l)
80% (168 mg/l)
70% (147 mg/l)
60% (126 mg/l
50% (105 mg/l)
40% (84 mg/l)
30% (63 mg/l)
20% (42 mg/l)
< 10 mg/l

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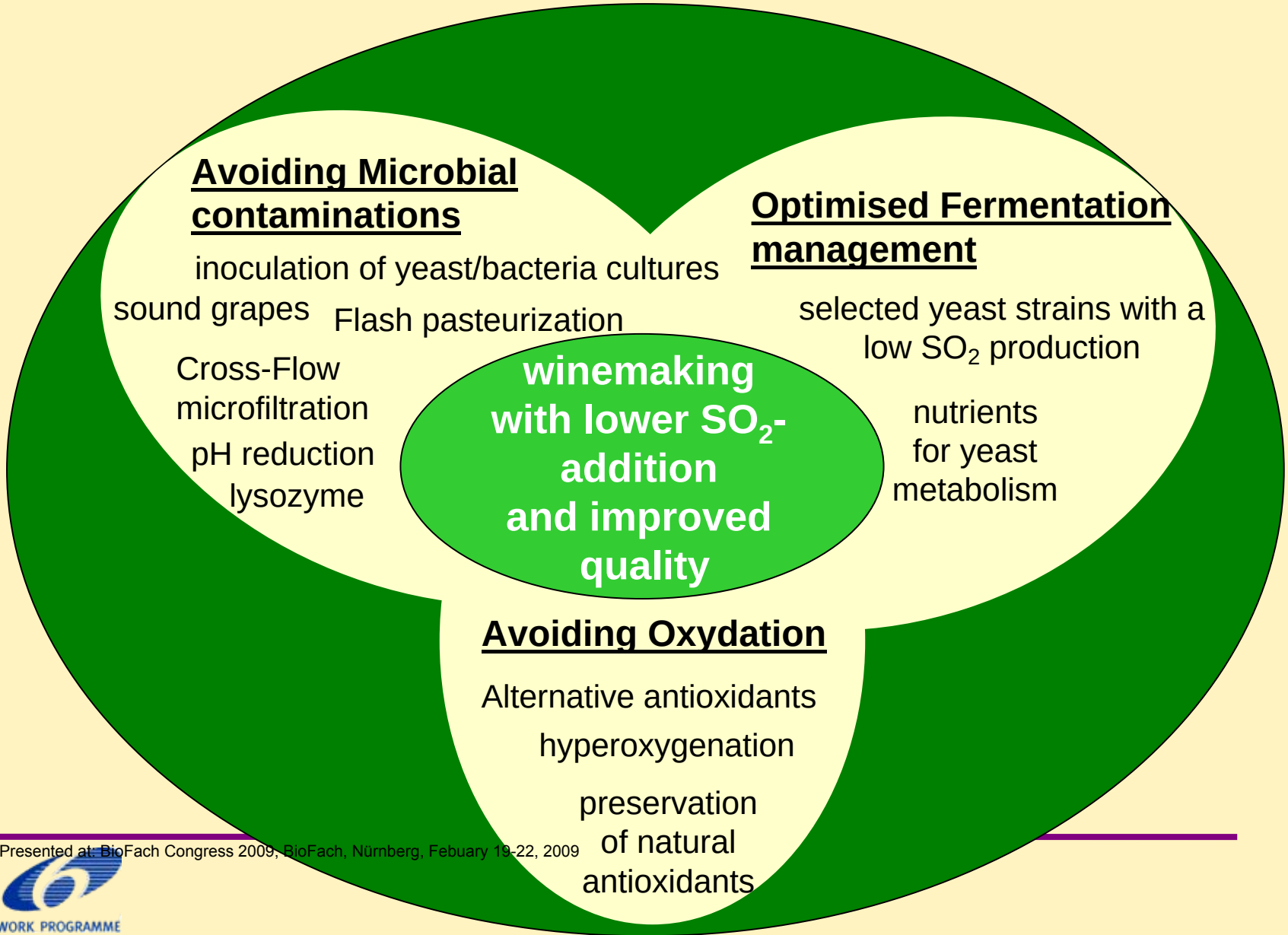
SO_2 issue: stakeholder consultation

- **Italy**: agreement for a reduction **until 50%** of actual CMO limits
- **France**: agreement for a reduction **until 20% to 30%** of the actual CMO limits but questions for wine in bulk and long storage wines
- **Germany**: general agreement for **no lower limitations than CMO limits**
- **Switzerland:** agreement for a **reduction until 20% to 30%**

SO_2 issue: laboratory and pilot-farms experimentations



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SO_2 issue : 30% reduction of CMO limit

Residual Sugars	< 5 g/L						> 5 g/L					
Wine Type	White			Red			White			Red		
CMO Limit * (mg/L)	210			160			260			210		
Limit with a 30 % reduction	147			112			182			147		
	N.	H.	%	N.	H.	%	N.	H.	%	N.	H.	%
France	46	1	98	211	3	99	20	1	95	6	0	100
Italy	111	0	100	298	9	97	24	0	100	35	0	100
Germany	13	0	100	21	2	90	31	0	100	5	0	100
Austria	21	0	100	18	0	100	11	1	91	2	0	100
Switzerland	2	0	100	9	0	100	1	0	100	1	0	100
Spain	3	0	100	23	1	96	1	0	100	1	0	100
TOTAL	196	1	99	580	15	97	88	2	98	50	0	100

* EU Reg. 1493/99

N. Total number of samples

H. Number of samples with SO_2 higher than the reduced limit

% Percentage of samples below the reduced limit

From WP3 results

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SO_2 issue : 50% reduction of CMO limit

Residual Sugars	< 5 g/L						> 5 g/L					
Wine Type	White			Red			White			Red		
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 SO_2 higher than the reduced limit

% Percentage of samples below the reduced limit

From WP3 results

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SO_2 issue : case of special wines

Special wines are proposes **to be excluded from SO_2 limitations**

- very “tradition specific” way of production
- cultural importance and nice market product
- total quantity of all “special wines” produced in the EU very limited
- SO_2 content commonly very high but the amount consumed is very limited, so inducing a limited impact on human health.

Practises

- None practises, already allowed in conventional, are required to be forbidden

- The new techniques which might be allowed soon for conventional wines, are mainly rejected

Negative list of techniques considered as non compatible with organic principles

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Practises : web survey results

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

Enrichment : 4 scenari

Scenario 1: no enrichment allowed

Scenario 2: enrichment allowed as in conventional wine but with organic ingredients

Scenario 3: enrichment allowed but with a reduction of 30% and with organic ingredients

Scenario 4: enrichment allowed but with a reduction of 50% and with organic ingredients

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Enrichment : scenari 3 & 4

	Zone A	Zone B	Zone C
No reduction (scenario 2)	3;5%	2,5%	2%
Reduction of 30% (scenario 3)	2,45%	1,75%	1,4%
Reduction of 50% (scenario 4)	1,8%	1,3%	1%

Southern countries ask for limitations

Northern countries are opposed to limitations

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Discussion

✓ Wine preservation: few SO_2 limitations and less additives or stricter SO_2 limitations and more additives allowed?

✓How to deal with the different European perceptions and positions on use and need of SO_2 ?

✓Is enrichment a concern of organic wines or rather of controlled origin wines ?

✓Should an organic wine be linked to “terroir” ?

✓“Industrially processed” wine – what is still acceptable?

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Conclusion

Main specificity of organic wines:
to be made with organic grapes

To make organic wines as to produce organic grapes:
first using preventive methods

The wonderful diversity of European wines have to exist also in organic !

THANK YOU FOR YOUR ATTENTION