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Production of Organic Alcoholic Beverages as an Example of Sustainable Agriculture

Jiří Zelený, PhD

Organic Food & Beverages in the Czech Republic

- ▶ Organic food is designated by the „BIO“ stamp (organic food / biopotravina)
 - ▶ Demand for organic food on the Czech market exceeds the supply
 - ▶ E. g., organic oils are mostly imported
 - ▶ Organic food market lagging behind the one in Western Europe
 - ▶ Taking into consideration the Czech food market, the organic food share is only 1%
 - ▶ Usually, Czech organic food is with significantly higher prices compared to conventional food



What is the Response of Consumers of Alcoholic Beverages to Organic Production?

- ▶ Wine consumers tend to pay more for organic wine if they have higher environmental consciousness
 - ▶ *(logit model; Italian market; D'Amico et al., 2016)*
- ▶ Low-quality wines (evaluated during the competition) that bear the organic label are with significantly higher prices on the market
 - ▶ But it is contradictory for high-quality wines where organic certification does not increase the price of the wine
 - ▶ *(hedonic price model; Italian market; Abraben et al., 2017)*
- ▶ Consumers buying organic wines are in terms of age and social class different from non-organic ones
 - ▶ *(German market; Szolnoki & Hauck, 2020)*



What is the Response of Consumers of Alcoholic Beverages to Organic Production?

- ▶ Studies dealing with consumers of organic spirits missing completely; there are only some chemical studies exploring the characteristics of organic spirits
 - ▶ (*rums in Brazil; A. Silva et al., 2013*)
- ▶ For beer, consumers do not have a higher willingness to pay for organic beer when compared with the conventional one
 - ▶ (*Belgian market; Poelmans and Ruusseau, 2017*)
- ▶ Informing consumers about the beer having an organic certification does not increase the hedonic liking, and it affects negatively WTP
 - ▶ (*Oregon USA; Waldrop and McCluskey, 2018*)



What Are Specifics of Czech Alcoholic Beverages Producers with Organic Certification?

- ▶ **What practices of organic farming do we know in general?**
 - ▶ Welfare practices (farming poultry in cages not allowed)
 - ▶ Artificial preservative-free
 - ▶ No dyes, no artificial flavourings
 - ▶ Usually traditional procedures of production
 - ▶ No drug residues, no ionizing radiation
 - ▶ GMOs forbidden
 - ▶ Is environmentally friendly



What Are Specifics of Czech Alcoholic Beverages Producers with Organic Certification?

▶ Producers of organic spirits in the Czech Republic

▶ Just a few producers

▶ One of them is Zámecké Sady Chrámce

▶ Plum spirit (brandy); 50.6%

▶ The producer states that the spirit is

organic as:

□ (1) Plums used for the production are grown in „organic mode“

□ (2) The fermentation process is „natural“

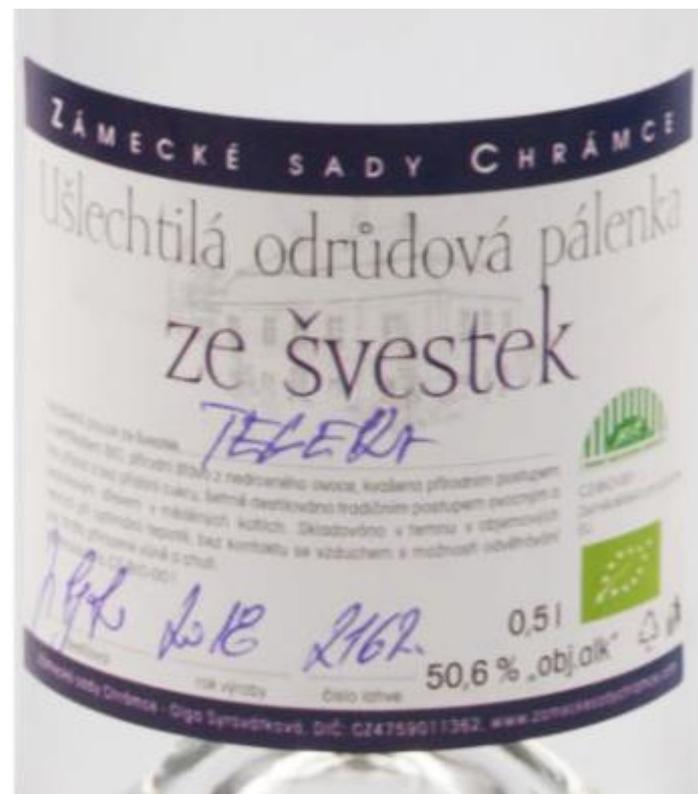
□ (3) The distillation is „traditional“ as they

use small copper pot stills

▶ Plum variety Tegera

□ It ripens in the second half of July

□ Very sweet and aromatic pulp



What Are Specifics of Czech Alcoholic Beverages Producers with Organic Certification?

▶ Producers of organic wines in the Czech Republic

▶ Many winemakers

- ▶ One of them is organic winery Vinařství Špalek
- ▶ The producer states that the wine is organic as:
 - He does not use artificial fertilizers and synthetic pesticides

▶ Cuvée of Pinot Blanc and Riesling

- Late harvest, semi-dry
- Znojensko region, Kraví hora
- 11.0% abv
- SO2 is included, suitable for vegans as well
- Candied fruit, caramel, marmalade



What Are Specifics of Czech Alcoholic Beverages Producers with Organic Certification?

▶ Producers of organic beers in the Czech Republic

▶ Just two producers

▶ Žatecký pivovar one of them

▶ The producer states that the beer is organic as:

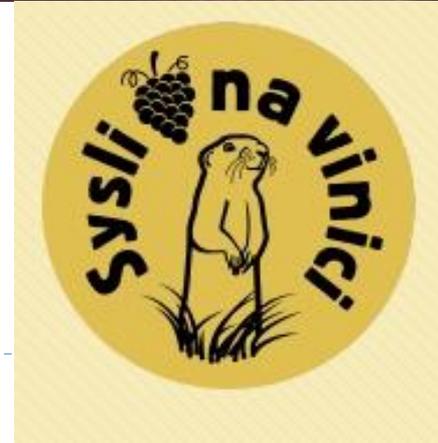
- All the ingredients used are organic
- Organic hop is from Žatecko
 - Costs of production are about 60% higher
 - As a pesticide, seaweed extract is used
 - Aphids are destroyed by tropical tree extract
- Malted organic barley from Germany
 - Costs of production are about 100% higher
- 4.5% abv
- Earthiness and spiciness present, strong carbonation
- Suitable pro coeliacs, they use a special enzyme to break the gluten





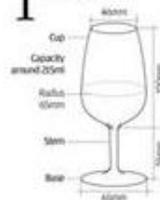
Other Ways of Supporting Sustainability when Producing Alcoholic Beverages

- ▶ Organic farming is just one of the sustainable approaches
- ▶ Reaching bio-diversity is another one (especially for critically endangered animals)
- ▶ No pesticides, rodenticides, grass present



Tasting, step by step

1 Serving



Wine tasting glass standard dimensions vary within a limit

Fill the glass to 1/4 or 1/3 of its volume



The wine bottle Most common volume is 75cl (750ml), but sizes vary

Inside a grape

Grape skin

Tannins and phenols are here in high concentration (dried grapes)

Pedicle

Central zone

Made up of Sugar

Seed

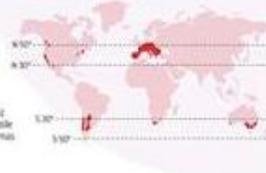
Intermediate zone

Tartaric acid Sugar

Peripheral zone

Potassium Potassium Acidity Sugar Acidity

Where wine comes from



2 Visual appreciation

Looking at the wine often gives a whole or an indication of the sensations to follow



View against a bright and white background

Hold by the stem

Transparent and clean glass

Evaluate the wine:

1 Colour Hue and depth of intensity

2 Clarity Should be brilliant; clear, clean, like or bloodiness denotes unacceptable wine

3 Viscosity, bubbles Note any resistance to flow and the effervescence (more typically for sparkling wine)

3 Aroma appreciation

First smell the wine before swirling



Faulty wine

Smells acrid, unpleasant or vinegar smell means wine could be oxidized, has acetic acid or has cork contamination

Most notable aromas



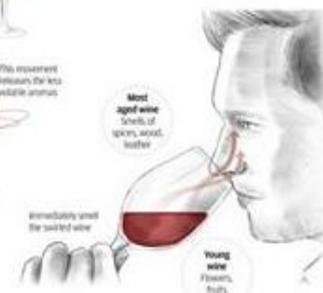
Swirl the wine glass

This movement releases the less volatile aromas

Most aged wine

Smells of spices, wood, leather

Immediately smell the swirled wine

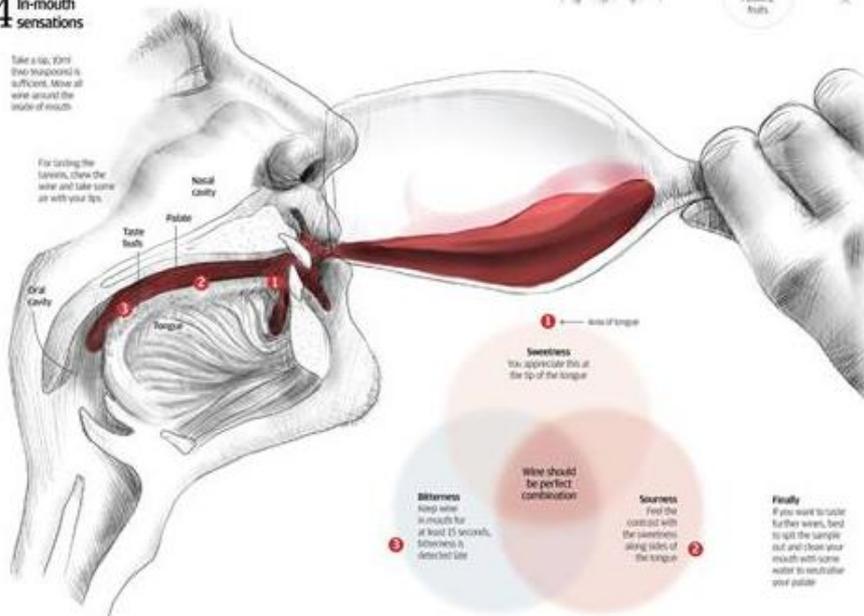


Young wine

Flowers, fruits

4 In-mouth sensations

Take a sip, 10ml (two spoonfuls) is sufficient. Move all wine around the inside of mouth



For tasting the tannins, chew the wine and take some air with you lips

Nasal cavity

Palate

Taste buds

Tongue

Oral cavity

1 — Area of tongue

Sweetness You appreciate this at the tip of the tongue

Wine should be perfect combination

2 Bitterness Keep wine in mouth for at least 15 seconds. Bitterness is detected late

3 Sourness Feel the contact with the sweetness along sides of the tongue

Finally If you want to taste further wines, bend to spit the sample out and then use your mouth with some water to neutralize your palate