

# Tasting Olive Oil

Detecting quality and good practices through tasting



# Two very useful/revelatory tips

- ▶ For us and consumers there are two key moments in tasting olive oil that go long ways when evaluating any olive oil
- ▶ 1)When we smell, olive oil has to clearly evoke the vegetable kingdom. Of course, the fresher the better. To put it simply: it has to smell nice and fresh.
- ▶ 2)When the olive oil leaves the mouth (when we swallow), the mouth should be clean. A greasy mouthfeel will tell of a degraded olive oil.
- ▶ The overall feeling should be of a neat experience, not of something that coats our lips or tongue with viscosity or unpleasant flavors.



# Fruitiness, the ambassador of quality

- ▶ Aromas tell a lot about the quality (or lack of it) of an olive oil and some critical factors involved in olive oil making:
- ▶ A) Quality of the olives
- ▶ B) Good timing of the harvest
- ▶ C) Careful transportation
- ▶ D) Short time between harvest and milling
- ▶ E) High level of hygiene (including filtering)
- ▶ F) A mindful milling

# Fresh, green descriptors of medium or robust intensity (primary aromas)

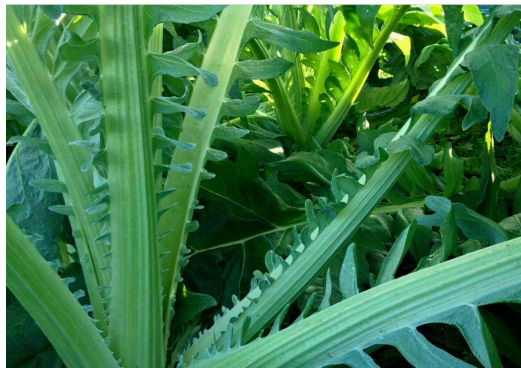
- ▶ They imply:
  - ▶ A) Sound, healthy olives
  - ▶ B) Harvesting at the ideal time, when olives are not too green, not too ripe
  - ▶ C) A good phenol count as part of quality (phenols are present in higher numbers when the olives are greener and their essential to preserve perfumes).
  - ▶ D) Understanding the cultivar/cultivars you work with
  - ▶ E) Successful control of temperature (primarily, in the crushing moment, and while malaxing, too).
  - ▶ F) Very thoughtful milling (minimizing malaxing time, adding the minimum of water added to decanter and final separator -or avoiding the final separator step altogether, if your decanter allows for it-)

# The olfactory analysis

- ▶ In modern life we make little use of the potential of our olfactory apparatus and its capacity to analyze and discriminate.
- ▶ Bringing attention, training and periodic practice to this sub-utilize talent is essential to understand olive oil in depth. Everything we do to attain quality is in big part validated by our ability to apprehend the range of perfumes that can appear in olive oil.
- ▶ It's also essential to build up a precise vocabulary in order to understand each other and diminish subjectivity. The more accurate the description, the more we'll appreciate an olive oil in all fairness.



# Green descriptors



# Fresh, green descriptors of medium or robust intensity (primary aromas)

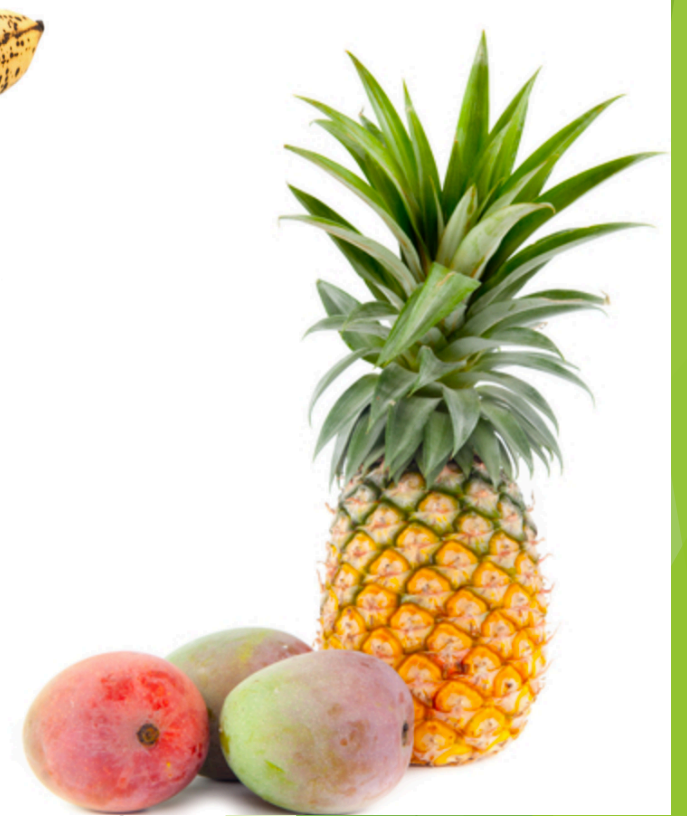
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# Ripe descriptors (secondary aromas)

- ▶ Olives were mostly ripe or over-ripe
- ▶ Temperatures could not be controlled or there was not awareness of this factor
- ▶ Abuse of temperature (ripe descriptors can appear with very green olives if milled with high temperatures).
- ▶ Over malaxing
- ▶ Confusing varietal characteristics with by-products of traditional handling of the olives, which creates false typicality.



# Ripe descriptors





# Borderline descriptors (they often indicate an issue)





# Descriptors indicating a minor issue or a mild defect





# Fruitiness Intensity is also part of quality

- ▶ When olives are harvested timely and reasonably milled, olive oil has at least a medium intensity if not robust. Too green olives and too ripe olives will be detrimental to this outcome.
- ▶ Just-made olive oils with low fruitiness rarely have to do with the cultivar. Though it's true that some cultivars are more aromatic than others, in most cases something happened in the production chain that impacted negatively the intensity of the aromas.
- ▶ Terroir and seasonal weather patterns are also factors.
- ▶ Durability of the perfume is also part of quality. There are olive oils that are quite aromatic in the beginning and then rapidly collapse. A good olive oil ages well, gracefully from harvest to harvest.

# What can a perfume tell?

- ▶ They are able to convey a sense of place (varietal characteristics), the many efforts behind it, the un-matched vitality (the definition of vitality is “the power giving continuance of life”) of olive oil.
- ▶ They can trigger emotions, sense of aliveness, sense of well-being, pleasure. They can enhance our intellect wanting to know more.
- ▶ “Perception as a second hand”, it’s an idea of James Gibson, a sensory psychologist. A guided experience by someone knowledgeable that expands our initial experience, as a good film critic can do.

# Biophilia

- ▶ Edward Wilson presented a very interesting theory in his book, *Biophilia* (1984). He defines **biophilia** as "the urge to affiliate with other forms of life".
- ▶ The term was first used by psychologist Erich Fromm to describe a psychological orientation of being attracted to all that is alive and vital.
- ▶ It means “love for life”.
- ▶ Green aromas evoke biophilia very much, specially when our tasting discrimination grows with practice.



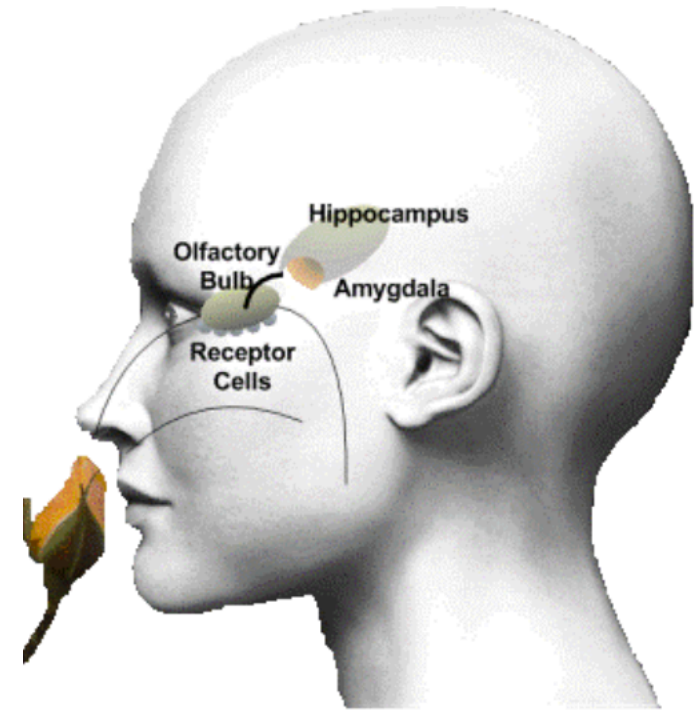
# On emotions and memories

- ▶ Perfumes are very powerful; the information from our nose actually goes directly to the brain; to a primitive part of the brain, that is involved in sort of an immediate response. It's rather an emotional response rather of an intellectual response.
- ▶ Perfumes can trigger emotions and memories.
- ▶ These can be nice though they're strongly subjective, often very personal.
- ▶ They can even be detrimental to an objective assessment of olive oil, as it happens when people are used to a way in which olive oil is made and how it smells and taste. It's important to recognize and avoid a "house palate" or a regional one.
- ▶ They don't have a role in a technical assessment.
- ▶ Once the technical tasting is done, they can be an addendum of value, particularly for consumers.



# Why do we smell what we smell?

- ▶ There are the same compounds in olives as they exist in other plants:
- ▶ Hexanal - green apple, grass
- ▶ Trans-2- hexenal - bitter almond, green
- ▶ Trans-2-pentenal- green, tomato
- ▶ Cis-3-hexenyl acetate- green banana
- ▶ Or in defects (decaying matter):
- ▶ Acetic acid- winey
- ▶ Ethyl acetate- fusty
- ▶ Butyrric acid- rancid, cheese



# The LOX process (lipoxygenase pathway)

- ▶ This is the process through which perfumes are created in olive oil.
- ▶ It happens, 75-85% in the crusher.
- ▶ The aromatic compounds are already in the olive but in small quantities and not so available for us to perceive.
- ▶ Once some enzymes get activated when olives are broken, these perfumes come to be much more pronounced.
- ▶ The Lox pathway requires a dose of oxygen. It's the only situation in which oxygen plays a positive role in olive oil.

# The Lox process II

- ▶ Achieving fresh perfumes will depend on:
- ▶ Cultivar
- ▶ Harvest time
- ▶ Milling equipment (type of crusher, type of malaxors, devices to cool down the olives and/or paste.).
- ▶ Milling practices, particularly the ability to control temperatures at the moment of crushing. The compounds favoring **green descriptors** thrive between **18C/64F** and **24C/75F**.
- ▶ From **25C/77F** to **28C/82F**, ripe descriptors will be favored.
- ▶ Over **28C/82F** will occur a loss of volatiles and the activation of negative enzymes.

# Full assessment of fruitiness

- ▶ The full assessment of the positive attribute of fruit is done in two moments.
- ▶ 1) Direct perception. This is done when we smell from the glass.
- ▶ 2) Indirect perception. This is done retro-nasally. When we bring air through the teeth (*“lo stripaggio”*), we warm up the olive oil and the current of air stimulates our nose again, retro-nasally. The perceived intensity of fruit is the sum of both moments, ***direct + indirect***.
- ▶ Therefore, it's important not to rush and assess intensity from the direct perception alone.
- ▶ Also, some volatile compounds are more easily detected retro-nasally, once they've been warmed up, pushed and turned into vapors by the “stripaggio”.

# Bitterness

- ▶ Bitterness is the second positive attribute.
- ▶ It's directly related to oleuropein, a family of phenols.
- ▶ The amount of bitterness and its quality depends on the presence of phenols in the cultivar (genetics), the season, the moment of harvest, the technology of the mill, plus the concepts and knowledge of the miller.
- ▶ These new singular olive oils are more bitter than traditional ones, and we are in a transition for the industry as a whole to fully appreciate these more bitter olive oils.



# Bitterness II

- ▶ We aim at a clean, “olive bitterness”, that makes you think of bitter herbs, salads.
- ▶ This type of bitterness has a nice evolution in our mouths, leaving a pleasant aftertaste.
- ▶ We try to avoid harsh, woody, medicinal (in the bad sense of the word) bitterness.
- ▶ Naturally, we also want harmonious olive oils, which means that bitterness has to have a similar intensity as the other positive attributes.

# Pungency

- ▶ Pungency is the third positive attribute.
- ▶ It's directly related to the ligstroside family of phenols, to which oleocanthal (oleo-oil-, cant-sting in Greek-, al-aldehyde-), belongs.
- ▶ It's a tactile sensation (an irritation of the trigeminus nerve), perceived mostly in the throat, though sometimes starting in the back of the oral cavity.
- ▶ It depends on the same factors as bitterness (genetics of the cultivar, seasonal weather, time of harvest, milling, etc.).

# Pungency II

- ▶ There are different forms in which pungency manifests.
- ▶ Sometimes is more pronounced initially, sometimes more lingering, sometimes starts in the mouth.
- ▶ What is important is to differentiate sound piquancy from a disturbing irritation brought by oxidation.
- ▶ In the case of an oxidized olive oil, pungency stays with us in an unpleasant way, as when we eat an old salami or anything that contains oil that has been degraded.
- ▶ I call it pungency vs. “scratchency”, which is actually a major sign of oxidation, sometimes in initial stages, or already from the rough defect or plain rancidity.

# Why did we smell what we smell?

- ▶ It's a very interesting practice, once we did the blind tasting, to take a look at the chemical analysis.
- ▶ High peroxides (7 and over, low phenol count, tight numbers or out of the standards of the UV analysis, will correlate with issues or defects (in these cases, oxidation, rough or rancid defects, perhaps low intensity of aromas, bland or absence of bitterness, low or bad quality pungency, etc.).
- ▶ A high acidity number will tell of poor quality fruit, perhaps affected by the fly, or poorly harvested, or over-ripe.
- ▶ It can be also useful to know cultivar, date of harvest, made with 2 or 3 phase, if the olive oil is filtered or not, how it has been stored.

# Visual examination

- ▶ While this examination does not correlate, necessarily, with quality. That's why in official tastings we use dark glass tasting cups. However, it can tell or confirm a series of things.
- ▶ Color can tell: great oils, often, retain a degree of green color. The first casualty of decay (by hydrolysis or oxidation) is chlorophyll.
- ▶ It can tell if an olive oil was filter or not, or if filtration has been done properly or poorly. When an olive oil has been filtered correctly, lights goes through it, brightening its color.
- ▶ Turbidity is the sign of an unfiltered olive oil.
- ▶ Some cloudiness, or a veiled olive oil, means that the filters have been used beyond their useful life.