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Gastronomic cultural EVOOolution of the virgin olive oil consumption model at the restaurant

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1 **EVOO-lution: Does the extra virgin olive oil consumption model can change at the restaurant?**

2

3 **Abstract**

4 The "new" consumer is a very complex and demanding figure, who seeks in the consumption of food products
5 not only a means to satisfy food needs, but experiences, emotions, feelings, service, nature, culture, etc.

6 The quality requirements do not only concern the chemical-physical and organoleptic components of the
7 product, but also the hedonistic ones, ie those related to the health aspects, the quality of the territory of
8 origin, the typicality, the respect of the environment by the production processes used , respect for animal
9 welfare, the ethical content of the product, etc. He is demanding in terms of information on the features of
10 the product and requires greater guarantees on its characteristics and / or on the production processes used.

11 All this seems to highlight the presence of potential unsatisfied needs around which it is possible to build
12 paths of development of the offer able to satisfy them, especially at the restaurant, where cultural, emotional
13 and multi-sensory satisfaction of food can be easily "discovered". This is the right time to change the
14 marketing of extra virgin olive oil at the restaurant, because extra virgin olive oil is an element that embodies
15 the different aspects of the expected and perceptible quality of a food: taste, sensory, knowledge,
16 sacredness, syncretism, health, history, naturalness and authenticity. Tasting a high quality oil, discovering
17 the complexity of the aromas released by the contact with the warm dishes and the gustatory and kinesthetic
18 perceptions that harmoniously interact by balancing the sensory profile of the other ingredients, is
19 comparable to the emotion of a blind man when recovers his sight. From that moment, as the blind man will
20 not be able to tolerate returning to the oblivion of darkness, the guests that tasted a high quality extra virgin
21 olive oil can not tolerate returning to the banality of a fat that anoints without seasoning.

22 **Key words:** extra virgin olive oil, restaurant, hedonistic dimension, sensory satisfaction, healthy properties.

23

24

25

26 Evolving means transforming gradually, progressively in order to reach a higher level. In this sense the
27 catering sector, in the last decades, stands evolving and growing: with 41 billion of added value euros, is the
28 sector driving the Italian and European food supply chain, overall more relevant of Agriculture and Food
29 Industry [1].

30 Eating out is one of the most popular leisure activities among Europeans, resulting in a booming restaurant
31 and food service industry. Food services, also known as catering services, refer to all services for out-of-home
32 consumption of food and drink, including restaurants, cafés, bars, takeaway, food delivery, contract catering,
33 cafeterias and other food vendors. The consumer foodservice market in Western Europe was valued at 427
34 billion euros in 2016 and the Eastern European market at 45.6 billion euros. Two of the biggest markets in
35 the food and beverage service industry are in the United Kingdom and France, where in 2015 enterprises
36 generated revenues of 87.8 billion euros and 63.2 billion euros respectively. In terms of presence, Italy and
37 Spain also compete, ranking highest for number of food service enterprises in the EU in 2014. [2] .

38 People visit the restaurant not only to eat, but they are looking for other experiences to engage all the senses
39 not only the taste [3]. Today we live a dimension that goes beyond simple satisfaction of the senses, to reach
40 to the need to enjoy immaterial contents of the product, those that through the narration of the historical
41 components, territorial, cultural and landscape satisfy the desire for "authenticity " [4] can compensate for
42 the sense of alienation that in modern industrial civilization makes feel people far from their roots a feel of
43 nostalgia: people searches in every element of consumption an identity [5].

44 An ultimate goal for science and technology should be the betterment of humanity and the welfare of human
45 beings. This occurs on different fronts, from food and nutrition to aiding man in performing his mental tasks.
46 Less tangible but no less important are other frontiers addressing the intellectual and emotional needs of
47 man.

48 Achrol and Kotler in a paper of 2012 [6] underlinrd that the field of marketing is facing a paradigm shift, truly
49 a ransformation like nothing ahead of, based on experiential and sensory marketing and on the ideas that
50 consumers needs to link their experiences to human senses, multi-sensory communication and perceptions,
51 factors intimately associated to each other.

52

53 The new needs linked to the changed styles of life can be declined in the different requirements of the quality
54 of a food: health, naturalness, history, syncretism, sensoriality. The common denominator of these
55 declinations is knowledge, the need to know and be aware that it dwells in every contemporary consumer.
56 Among the foods that best of all could meet these five requirements quality, helping to improve marketing
57 in the restaurant sector, without doubt there is extra-virgin olive oil (EVOO), the food element relegated
58 to an indistinct dimension, the so called "included in the price".

59 Oil is a seasoning element. Seasoning is a noble action, means making pleasant, to enrich with perfumes and
60 flavors a flat, and can only be done with an oil fresh and high quality [7-9]. All other oils of vegetable origin
61 (mainly from seeds) are colorless, odorless and tasteless because they are extracted with organic solvents
62 and are not edible before being subjected to a process of de-acidification, bleaching and deodorization.
63 Therefore, the other vegetable oils cannot season in the hedonistic sense of the action. The extra-virgin of
64 olive is the only oil naturally rich in antioxidants and that is good for health, natural because extracted only
65 by mechanical means, rich of thousands of years of history, capable of to merge sacred and profane elements
66 into oneself and to evoke, with plant sensations that releases, memories, memories, emotions, taste
67 expectations.

68 **Is extra virgin olive oil free at the restaurant?**

69 Today in the restaurant, the extra virgin olive oil is free. It is clear that the gratuitousness of a food is paradox
70 in an environment where either the water is not free. This is the main limit to the imposition of a strong and
71 deeply rooted product culture widespread among consumers [10]. The gratuitousness sets the restaurateur
72 in a position to guarantee himself the profit that it considers fair, choosing low-cost products, and the
73 consumer in the condition to tolerate this, mindful of the famous proverb: "Don't look a gift horse in the
74 mouth". Shortly: when receiving a gift be grateful for what it is; don't imply you wished for more by assessing
75 its value. The consumer is convinced that all that is received as a gift is something of earned and,
76 consequently, it is not necessary to be too picky about the quality of the gift. The question that every
77 consumer should make himself is the following: "Is the oil at the restaurant really free?".

78 Citing Michael Pollan "Cheap food is an illusion. There is no such thing as cheap food. The real cost of the
79 food is paid somewhere. And if it isn't paid at the cash register, it's charged to the environment or to the
80 public purse in the form of subsidies. And it's charged to your health". Consumers should remind that low
81 quality oils are poor of beneficial substances and are richer in molecules oxidized, pro-oxidants and to
82 promote in human body the formation of free radicals that can damage and compromise the functionality of
83 cell membranes cells, enzymes and DNA, promoting the phenomena of aging and increasing the risk of
84 diseases [11, 12].

85 Should the intransigence that the customer shows towards the service of unsealed water bottle be even
86 greater with respect to a low quality oil considering the dangerous influence in the long term on health? Let
87 we just add as an aside that extra virgin olive oil has a unique characteristic: the molecules responsible of
88 health properties are identifiable by the sensory evaluation (polyphenols are responsible of bitter and
89 pungent sensations), giving to the consumer a sensory tool useful to judge the quality and to establish the
90 product value.

91 **Don't just spend less. Spend smarter!**

92 The idea that the use of cheap olive oils can be beneficial to increase profits [13, 14] is shipwrecked
93 considering that bad oils often own bad olfactory defects, which come perceived by the customer before to
94 taste. Since the sense of smell is the sense of memory, and the smells we perceive they are always full of
95 emotion, a bad smell can provoke moods associated with the experience of disgust or of the danger linked
96 to the ingestion of the food. The best presentation will not suffice to compensate for the olfactory
97 disappointment. The same evocative power of the perfumes can be exploited to strengthen the desire to
98 taste and enjoy of the dish. Adding a good extra virgin olive oil, of course when the plate has come to the
99 table, means giving, to those waiting to eat, an extraordinary journey of imagination: a succession of fragrant
100 notes are released by contact with warm ingredients, merging and harmonizing with the other elements,
101 heralds the consumer gratification that will derive from subsequent tasting. Add the oil in the kitchen (as
102 normally occurs) means to defraud the guests of the most ephemeral and ineffable portion of the condiment,
103 which escaping into the atmosphere it cannot be appreciated as an element capable of creating a new rituals.

104 **Myths and rituals**

105 The ritual is a custom, a ceremony that celebrates important moments and which have value. EVOO for more
106 than five thousand years it was an integral part of religious rites. From pagan civilizations to today's
107 Catholicism, EVOO has been considered element of union of the human with the divine: it was used to anoint
108 statues, prepare ointments and to glorify the heroes. Today EVOO has loose the sacredness, and its' image
109 has been destroyed by greased cruets and bottles frequently topped up despite the laws in force. These
110 consolidate practices of use (or abuse) diminish its value in the eyes of those who consume it, by transferring
111 also in the domestic environment the same vilification. The new altar for the sacred seasoning should be just
112 the restaurant, place of gastronomic discovery where chefs and room managers, priests of the gastronomic
113 religion, can aspire to the maximum role of celebrant of taste, ambassadors of the product.

114 Why does people attend so much ostentatious solemnity towards wine and as much indifference to the oil?

115 **Oil and wine: elective affinities**

116 Goethe in the novel "Elective affinities" described the difference between oil and wine: «Some meet like
117 friends who immediately unite and they tune without mutating themselves, just as water is mixed and wine.
118 Others instead remain strangers, and do not join not even if mixed; as well as oil and water which, agitated
119 together, return immediately to separate". Insurmountable differences exist between oil and wine, however,
120 in the past centuries [15], the oil was favored, in terms of value, the wine. An ancient Italian proverb said:
121 "Merchant of wine, poor merchant, merchant of oil, merchant of gold". In the last century numerous positive
122 conditions but also adverse events, such as methanol scandal, have forced the consumer to pay attention to
123 the choice of wine, with a progressive growth of the global quality level of the product and a better spread
124 of its culture.

125 Although it is true that every parallelism between the world of wine and that of extra virgin olive oil olive
126 should be carefully avoided due to the different history and the diversity in the ways of use of the two
127 products at the restaurant, comparison plans can be identified to generate marketing opportunities for
128 valorization of the oil that can ensure economic and social sustainability for the different players in the supply
129 chain.

130 **Can two worlds apparently in antithesis converge?**

131 The many opposing aspects between the two products, oil and wine, would not leave boundaries of
132 confluence in the models of consumption, yet there is a sector in which the extra-virgin should "imitate" the
133 alcoholic beverage: the world of restaurants. The bottle of oil, like wine, must be open at the table,
134 celebrating the elements badges of the product you are serving, which will be possible to appreciate thanks
135 to the fact that, in the sealed bottle, the aromas and flavors [16] wisely molded from the skillful miller they
136 are preserved to offer, intact, the meeting with the senses. The best and unrepeatable moment, from the
137 point of view of gratification hedonistic, corresponds to those short seconds in which the first drops of oil fall
138 on the plate and the volatile molecules at low molecular weight are released by investing the consumer face
139 penetrating into the nostrils. That's the moment in which in the brain an avid expectation of taste the is
140 created, and it can be satisfied only through the tasting.

141 If the waiter is able to narrate the product, a silent space for the customer attention will be created:

- 142 - keeping the time to listen to a story,
- 143 - looking at the dish and its design, shapes and colors,
- 144 - generating a premonition of the taste

145 in a growing of desire stimulated by the perception of aromas released by the instantaneous addition of the
146 oil. The wait will be rewarded and finally satisfied through the tasting, the consumer will be granted with the
147 taste and touch, in the mouth, emphasized by oily seasoning which is a vehicle and an amplifier of flavors.

148 The exclusivity of opening a bottle (or more) per table requires that the oil bottles have to be small, no more
149 than 100 milliliters, with the advantage that a small price for the single bottle means an interesting value per
150 liter for the producer (if the bottle with a volume of 100 ml oil is sold for 3 euros, would mean reaching a
151 value of about 30 euros per liter – about four times the medium value of an Italian product). Moreover, a
152 small one bottle can be brought home too, allowing marketing action to continue also in the home,
153 influencing subsequent purchases.

154 A closed bottle will assure:

- 155 • TRANSPARENCY The closed bottle keeps the promise of the product description shown on the card or
156 illustrated by the person in charge of the oil: the customer does not feel cheated and justifies the price
- 157 • SAFETY The customer is certain of the relationship between the content of the bottle and the declarations
158 on the label
- 159 • CLEANLINESS The sealed bottle not touched by dozens of unknown diners guarantee high hygienic
160 standards
- 161 • IMAGE The sealed bottle makes the product unique, distinct and recognizable.

162 **The importance of motivation**

163 Innovation in commercial processes requires the need to satisfy explicit or unexpressed needs. To modify the
164 service mode and introduce innovations in the oil marketing model extra virgin olive oil at the restaurant it
165 is necessary to start from the need to transform the seasoning from cost to profit.

166 It is necessary to find the right levers to convince the consumer of the opportunity of change, pushing it to
167 the outside of the "comfort zone" of the " product included in the price" and identifying the right reasons to
168 improve the willingness to pay. New needs inevitably generate new services, and represent the stimulating
169 factor that produces changes. Motivations can range from the most basic need for hygiene, guaranteed only
170 by the closed bottle, which has not already been handled by others and that in its entirety it can ensure
171 correspondence between content and label, at more advanced need to protect molecules antioxidants with
172 healthy action [17], and to the need for gratification that can result with different organoleptic properties
173 result of the varied biodiversity olive growing and the different technologies of production [18, 19], fully
174 appreciable only if the bottle is just opened.

175 No one among customers at the restaurant would drink with pleasure if a bottle of was served wine opened
176 for days, maybe moved by one table at the other at the mercy of the different patrons. With even more
177 disappointment, any costumer would refuse to drink water that is spilled by a partially emptied bottle. If the
178 oil is package for long time in an opened bottle it loses volatile molecules losing the complexity of the
179 olfactory profile and, due to the faster oxidative processes, it softens in taste and can manifest defects, even
180 absorbing odors from the environment surrounding.

181 Alongside these needs that concern the material sphere of the product, new immaterial needs can motivate
182 food choices and changes in methods of purchase and consumption of oil at restaurant; among these, surely
183 the need to eat consciously, to know and learn information on everything is ingested. The need to know, in
184 fact, when others needs are already attained, allows to be aware of each own decisions attributing value to
185 what you choose. Awareness is the first of the three steps a customer must take to decide whether or not to
186 pay for a service or a product. Acquire information on extra-virgin olive oil (only oil deriving from fruit and
187 not from seed, extract only by mechanical and non-chemical means, therefore rich in multiple organoleptic
188 properties and health, etc. [20, 22]) allows to objectively evaluate the relationship between costs and
189 benefits deriving from the purchase and to decide, without hesitation, if is worth it. People who choose to
190 eat outside the home, and in particular at the restaurant, are paying an experience an associated emotion to
191 food, an experience to remember.

192 **The Oils' list: biodiversity and territories**

193 The list of the oils, declaimed, desired, invoked, today it is still a chimera, if not in some rare restaurant where
194 the expectation created from the rich descriptions shipwrecked on the oil cart composed of dozens of bottles
195 open indefinitely and probably no longer faithful to the promise made by drawing up the offer.
196 However, the idea of the oil's list is challenging. Restaurant marketing has multiplied profits by editing the
197 most varied types of lists for whet the curiosity of consumers most demanding: water, tea and herbal teas,
198 vinegars, beers, coffee, bread, cheese. The list of foods that can be offered to the costumers selled by means
199 a list is multiplying. The different ones lists all serve the same purpose: constitute a sales tool that offers the
200 customer the opportunity to choose by comparing features and prices. As long as the EVOO is free it cannot
201 be able to afford to have his list because the restaurateur is first and foremost an entrepreneur who decided
202 to invest capital in the restaurant business, an activity which is characterized by the risk, and each additional
203 service must have the right balance return on investment. In the case of wine the prices shown on the list
204 have an average mark-up of two times and a half compared to the purchase price from the distributor. This
205 is not surprising because reloading is linked to necessity to guarantee a wide choice of labels which translates
206 into the need to invest to sort the cellar with the risk of do not sell the product [23].

207 In light of the above, the list of the oils has to be considered the point of arrival and not of departure. It has
208 to represent the destination of a journey that is born from awareness on the part of chef on the capacity that
209 has quality oil to enhance a dish and the culture of product that the room staff has to possess to present it
210 properly, to arrive at the creation of awareness, in the consumer, of value hedonistic and healthy of the
211 extra-virgin necessary to determine the willingness to pay. The oils' list ally cannot certainly be the bottle
212 cart. If the list is intended to enhance the characteristics of the varieties, the producer, the extraction system
213 and the relapses on the experience of tastes, fragrances and combinations that may arise, it is necessary
214 build a model next to the paper conservation and service they take extra-virgin olive oil protected from light,
215 heat, oxygen that oxidize and cause the rancidity of the oil. Bearing account of the short shelf life of the oil,
216 the creation of an oil store in the restaurant is associates with an economic risk in the investment much
217 higher than in the case of wine, especially if the variety is extended supply.

218 It will be appropriate to choose small containers (100 ml) to be stored in sheltered areas from thermal abuse,
219 guaranteeing the chain of darkness and the absence of humidity and odors. Looking at how many efforts they
220 have been made in recent years to try bring the average consumer closer to recognition of the qualities of
221 extra virgin olive oil, one wonders if it is correct to use sensory analysis, intended as a method for evaluation
222 organoleptic properties of virgin olive oils, as a tool to introduce the consumer to the universe of olive oils.
223 If it is true that the consumer look for a rewarding experience, the approach with modern and quality oils,
224 characterized by an intense bitter and pungent taste, becomes difficult and complex because that have little
225 to do with the taste of the oils that were consumed commonly up to a few decades ago, the result of obsolete
226 extraction techniques and reckless practices, but which are part of the collective imagination and represent
227 the touchstone of the inner comparison. The oil should always be presented in pairing with bread, maybe
228 hot for a light entrée while waiting for them main courses already ordered and in preparation.

229 **No restaurant it's an island**

230 The territory surrounding the restaurant is not a simple space contiguous to the place where the restaurant
231 is located. It is a culture and a productive landscape in which numerous agri-food enterprises to express
232 talent for foods and wine. Every good restaurant therefore it is an integral component of a community. If the

233 restaurant is placed into a region characterized by olive growing vocation, it has to find allies with olive millers
234 and olive growers in order to actively promote a vigorous product culture. With the alliance with the miller,
235 the restaurateur earns the guarantee of consistency of high standards of product; With the alliance with the
236 olive growers, the olive miller earns the guarantee of high quality of olive fruit. With the alliance with the
237 olive growers, the restaurateur earns the guarantee of a beautiful landscape surrounding the restaurant
238 because of the olive grower is a custodian of the territory, inseparable element of the product.

239 Aligning means guaranteeing fair profit to all the players in the supply chain. An olive grower who carries out
240 a non-remunerative activity loses interest in the care of the olive grove. The abandonment of the olive grove
241 corresponds to the destruction of the beauty of the landscape, which is part of the immaterial value of the
242 product served at the table. If there is no interest for an olive growing model that is not able to guarantee
243 the right income, there will be no opportunities for the tourism and the receptive activities involved.

244 **Conclusion**

245 The marketing of the EVOO at the restaurant has to be interpreted as the set of initiatives and actions aimed
246 to persuade the customer to pay the product (EVOO) with satisfaction (the pleasure derived from the
247 experience compensates the cost of item).

248 So it is necessary a new professional figure able to realize this innovation: the “EVOO restaurant taster” – the
249 waiter assigned to EVOO service. The goal is not to have an expert taster. He must have basic sensory skills
250 are: recognizing defects to exclude poor quality oils, recognizing the positive characteristics to describe the
251 oil he is serving. He must have knowledge of the best way to serve oil at the table and lead customers into a
252 sensory experience that allows them to perceive value and pay a price. Moreover, he must have an essential
253 knowledge of cultivars and territories.

254 The main skills can be divided into three basic areas:

- 255 - The EVOO restaurant taster knows the sensory, nutritional and healthy characteristics of extra virgin
256 olive oil and the interactions with the other ingredients of the dish

257 - The EVOO restaurant taster is able to serve extra virgin olive oil creating a ritual and guiding the guest
258 in a sensory path of hearing, sight, smell, taste in an active and conscious, emotional and able to generate
259 the desire of reiteration

260 - The EVOO restaurant taster can convey in a simple and effective, never invasive way, the necessary
261 and sufficient information for a story-telling aimed at giving the customer the right level of knowledge of the
262 intrinsic and extrinsic characteristics of the product useful and indispensable to increase perceived pleasure.

263 **Bibliography**

264 [1] Facts and figures on EU agriculture and the CAP (common agricultural policy)
265 https://ec.europa.eu/agriculture/statistics/facts-and-figures_en

266 [2] <https://www.statista.com/topics/3966/restaurants-and-food-services-in-europe/>

267 [3] Cao, Y., Li, X.R., DiPietro, R. and So, K.K.F., 2018. The creation of memorable dining experiences: formative
268 index construction. *International Journal of Hospitality Management*. doi.org/10.1016/j.ijhm.2018.10.010.

269 [4] Chatzopoulou, E., 2018. A grounded theory of authenticity and quality constructions for ethnic
270 restaurants: implications for effective marketing strategies. (Doctoral dissertation, Newcastle University).

271 [5] Li, Y., Lu, C., Bogicevic, V. and Bujisic, M., 2019. The effect of nostalgia on hotel brand attachment.
272 *International Journal of Contemporary Hospitality Management*, 31(2), pp.691-717.

273 [6] Achrol, R. S., & Kotler, P. (2012). Frontiers of the marketing paradigm in the third millennium. *Journal of*
274 *the Academy of marketing Science*, 40(1), 35-52.

275 [7] Roselli, L., Cicia, G., Cavallo, C., Del Giudice, T., Carlucci, D., Clodoveo, M. L., & De Gennaro, B. C. (2018).
276 Consumers' willingness to buy innovative traditional food products: The case of extra-virgin olive oil extracted
277 by ultrasound. *Food research international*, 108, 482-490.

278 [8] Restuccia, D., Clodoveo, M. L., Corbo, F., & Loizzo, M. R. (2018). De-stoning technology for improving olive
279 oil nutritional and sensory features: The right idea at the wrong time. *Food research international*, 106, 636-
280 646.

281 [9] De Luca, M., Restuccia, D., Clodoveo, M. L., Puoci, F., & Ragno, G. (2016). Chemometric analysis for
282 discrimination of extra virgin olive oils from whole and stoned olive pastes. *Food chemistry*, 202, 432-437.

283 [10] Giordano, S., Clodoveo, M. L., De Gennaro, B., & Corbo, F. (2018). Factors determining neophobia and
284 neophilia with regard to new technologies applied to the food sector: A systematic review. *International*
285 *Journal of Gastronomy and Food Science*, 11, 1-19.

286 [11] Bowen, K.J., Kris-Etherton, P.M., West, S.G., Fleming, J.A., Connelly, P.W., Lamarche, B., Couture, P.,
287 Jenkins, D.J., Taylor, C.G., Zahradka, P. and Hammad, S.S., 2019. Diets Enriched with Conventional or High-
288 Oleic Acid Canola Oils Lower Atherogenic Lipids and Lipoproteins Compared to a Diet with a Western Fatty
289 Acid Profile in Adults with Central Adiposity. *The Journal of nutrition*, 149(3), pp.471-478.

290 [12] Sroka, Z. and Cisowski, W., 2003. Hydrogen peroxide scavenging, antioxidant and anti-radical activity of
291 some phenolic acids. *Food and Chemical Toxicology*, 41(6), pp.753-758.

292 [13] Roselli, L., Clodoveo, M. L., Corbo, F., & De Gennaro, B. (2017). Are health claims a useful tool to segment
293 the category of extra-virgin olive oil? Threats and opportunities for the Italian olive oil supply chain. *Trends*
294 *in Food Science & Technology*, 68, 176-181.

295 [14] Salvo, A., La Torre, G. L., Rotondo, A., Mangano, V., Casale, K. E., Pellizzeri, V., ... & Dugo, G. (2017).
296 Determination of squalene in organic extra virgin olive oils (EVOOs) by UPLC/PDA using a single-step SPE
297 sample preparation. *Food analytical methods*, 10(5), 1377-1385.

298 [15] Clodoveo, M. L., Dipalmo, T., Crupi, P., Durante, V., Pesce, V., Maiellaro, I., ... & Franchini, C. (2016).
299 Comparison between different flavored olive oil production techniques: Healthy value and process efficiency.
300 *Plant foods for human nutrition*, 71(1), 81-87.

301 [16] Boskou, D., Camposeo, S., & Clodoveo, M. L. (2015). Table olives as sources of bioactive compounds. In
302 *Olive and Olive Oil Bioactive Constituents* (pp. 217-259).

303 [17] Clodoveo, M. L., Dipalmo, T., Schiano, C., La Notte, D., & Pati, S. (2014). What's now, what's new and
304 what's next in virgin olive oil elaboration systems? A perspective on current knowledge and future trends.
305 *Journal of Agricultural Engineering*, 45(2), 49-59.

306 [18] Clodoveo, M. L., Hbaieb, R. H., Kotti, F., Mugnozza, G. S., & Gargouri, M. (2014). Mechanical strategies
307 to increase nutritional and sensory quality of virgin olive oil by modulating the endogenous enzyme activities.
308 *Comprehensive Reviews in Food Science and Food Safety*, 13(2), 135-154.

- 309 [19] Clodoveo, M. L., Camposeo, S., De Gennaro, B., Pascuzzi, S., & Roselli, L. (2014). In the ancient world,
310 virgin olive oil was called “liquid gold” by Homer and “the great healer” by Hippocrates. Why has this mythic
311 image been forgotten?. *Food Research International*, 62, 1062-1068.
- 312 [20] Clodoveo, M. L. (2013). New advances in the development of innovative virgin olive oil extraction plants:
313 Looking back to see the future. *Food research international*, 54(1), 726-729.
- 314 [21] Amirante, P., Clodoveo, M. L., Tamborrino, A., Leone, A., & Dugo, G. (2008, September). Oxygen
315 concentration control during olive oil extraction process: a new system to emphasize the organoleptic and
316 healthy properties of virgin olive oil. *Acta Horticulturae* 949, pp. 473-480.
- 317 [22] Amirante, P., Clodoveo, M. L., Tamborrino, A., & Leone, A. (2008, September). A new designer malaxer
318 to improve thermal exchange enhancing virgin olive oil quality. In VI International Symposium on Olive
319 Growing 949 (pp. 455-462).
- 320 [23] Ponte, S., 2009. Governing through quality: conventions and supply relations in the value chain for South
321 African wine. *Sociologia ruralis*, 49(3), pp.236-257.