

OLIVE MILLS AND MILLHOUSES IN THE DUBROVNIK AREA

The oldest method of obtaining olive oil for household use was by crushing olives in stone troughs, basins, or mortars using mallets or pestles, and by cooking them to extract the oil. A very old method of obtaining olive oil was also crushing olives in a small mill built against the outer wall of a house or utility building, also known as *mlinac*, *toć*, or *valjavac*. Such a mill consisted of an elongated stone trough and vertically placed millstone about 50 cm in diameter, which had a hole in the centre into which a wooden lever was inserted, sometimes supported with wedges. One end of the lever was anchored into the house wall, while the other extended freely beyond the wheel and served to move the wheel left–right, lengthwise along the trough, thereby crushing the mixture.

After crushing, the olive paste was packed into bags, sacks made of coarse hair or wool, and in the *konoba* (cellar, storage, mill house) it was placed in a wooden container (*postava*, *maštjela*, *maštila*), doused with hot water, and trampled by foot, which released the oil. The oil would rise to the surface and be collected with a wooden spatula – *šešula*. The last drops of oil would be gathered with a spoon or a whisk made from reed flower. Small courtyard mills were preserved mainly on the islands of Mljet, Korčula, Lastovo, Vis, and on the Pelješac Peninsula. In 1963, painter Živko Kljaković recorded during his field research in Broce on Pelješac a transitional type of mill composed of a somewhat lower round stone basin – *koruna* – and a larger, free-standing, vertically positioned millstone placed in the *koruna*. A larger opening in the centre of the millstone held a wooden lever secured with wooden wedges, which was pushed in a circle by several people from both sides. As a result, the millstone would rotate along the edge of the *koruna*, crushing a larger quantity of olives.

Oil mills with large millstones and wooden presses were, in the Middle Ages, an integral part of the economic buildings owned by the wealthy classes of surrounding areas—namely, the nobility who managed their feudal lands and peasants. With the purchase of the Pelješac Peninsula, Dubrovačko Primorje, and Konavle in the 14 th and 15 th centuries, the previous landowners became peasants, and the Dubrovnik nobility became the new owners of the estates. They encouraged agricultural development, including olive growing. Large residential-economic complexes were built, in which, along with other buildings and facilities, large oil mills appeared. Traces of feudal relations were recorded in Dubrovačko Primorje up until the early 20 th century. On All Saints' Day, the 1 st of November, the nobility would, together with their people, estimate the olive yield on their estates cultivated by peasants—formerly serfs. From the assessed quantity, *the stim*, peasants were required to give one-quarter to the lord, which was stored in his storage house. Everything harvested before assessment was not counted toward this portion. Over time, as capital was accumulated, the former serfs bought their freedom from feudal obligations, and from the 19 th century began gradually purchasing properties with their buildings, strengthening large extended households or communal families. If a communal family had its own oil mill, the milling of their own olives was done entirely by household members. However, if the mill was used by individual families without one of their own, two or three workers – millers – were selected either from the family whose olives were being milled or hired as paid labourers. The *proto* or mill foreman, often the owner of the mill, oversaw the workers and milling process. A mill could also be co owned, usually by brothers, who had shares in the business if the mill remained joint

property after the division of the communal family, or if a new one was built with shared investment. The most experienced person would be chosen as mill foreman. Brothers would take turns milling olives weekly, each household having its assigned time. Wealthier individual families could also own mills, using them for both their own production and for extra income by milling for others. The mill foreman kept a schedule of families awaiting their turn and would call the next in line using a large metal funnel (*špijerlica*). Mills were always used at full capacity, and if a grower didn't have enough for a full run, they would combine olives with another and share the oil proportionally. For using the mill, the owner received *ujam*, *ušur*, *kirija* – a fee in kind. This was typically a *kuto uja* – ranging from one to two litres, or a Turkish measure of one litre and three-eighths. *Kirija* was two litres, and it was collected by the mill foreman immediately after oil stopped flowing from the first pressing. In Konavle, the mill owner also received *obarine* – the pomace from the press that hadn't been fully drained. From twelve pressing mats of *obarina*, the owner could later extract 14 to 20 litres of lower-quality oil. Hired workers (*millers*) were paid as agreed. The mill foreman could also be hired and, in addition to payment, would receive the lowest-quality bottom pressing mat of pomace, known as *baba*. If the olive grower did not have his own horse or ox for powering the mill, he had to pay half a litre of oil or a monetary sum, and the animal's owner was responsible for feeding it during work. The owner of the mill or the olives was required to provide lunch to the workers in the mill and would treat them to brandy, dried figs, and fried dough (*priganice*). Once milling began, it wouldn't stop – sometimes continuing at night by the light of oil lamps with two spouts and wicks, fuelled by the owner's oil from the first mill run. Freshly picked olives were called *branice* or *trganice*, while those collected from the ground or between boundary lines were called *kupljenice*. After harvesting, the olives were transported in *sepeti* – baskets made of cypress bark – or in *saci* – jute sacks—or other bags and poured into storage compartments in the mill (*hambari*), which were concrete or stone containers (*pila*) or wooden vats (*žetke* or *kace*). To prevent them from drying out and to help release oil (*dozreti*, *stažumati*, or *sažumati*), some of the first-picked olives were sprinkled with fresh or sea water. If the olives were ripe enough, they were poured directly from baskets or sacks into the *koruna* (mill basin) with one or two millstones. The olives were then crushed – *privijanje*, *zavijanje*, or *mljevenje* – mostly by hand. By the late 19 th century, human power was replaced by horses and oxen—one or two, walking one behind the other. A horse with a harness (*ham*) was tied to a wooden beam (*lanca*) and pulled the millstone. An ox was fitted with a neck pad and a wooden crossbar inserted into the pulling beam, which it pushed forward. Later, a yoke was used to attach the ox to the beam. During crushing, or rotation of the millstone, a process called repositioning or scraping was performed. With a wooden stick or the back of a shovel, the mill foreman pushed the olive mash back under the stones. If powered by an ox, milling lasted an hour and a half; with a horse, somewhat shorter; and the fastest was milling in a water-powered mill—around half an hour. During milling, the horse or ox would turn the millstone 100 to 200 times, depending on olive ripeness, quantity, and whether one or two stones were used. Exceptionally rich olives could release oil directly into the stone basin with millstones. This dark yellow oil was scooped from the paste with a spoon and considered medicinal. The paste obtained from crushing in the stone basin was scooped by hand or with a wooden scoop into pressing bags, or brought in buckets to the place where the bags were filled and stacked on the press—with each layer doused with hot water.