TURNING OLIVES *into* OIL

LIKE MOST OLIVE FARMERS IN THE NORTHERN HEMISPHERE, we actually begin to make our oil each year around the time of the spring equinox in March. If that seems early, it's just at that point that one of the most important activities of the entire season takes place—pruning and fertilizing the trees.

We don't prune each and every tree every year, although some producers do, especially those with dense, super-intensive olive orchards, the trees planted in such close hedgerows that they look from a distance like a vineyard. (In fact, this is sometimes referred to as "hedgerow planting.") Unlike a traditional olive orchard, a super-intensive grove is designed for mechanical pruning and harvesting, using equipment similar to that originally developed for mechanical cultivation of vineyards. For this reason, the trees must be pruned every year to keep them tight and compact. Mechanically pruning and harvesting, proponents of super-intensive cultivation say, saves enormously on labor expense, even if the oil produced by these methods isn't prime quality and the environmental costs, in water use and pollution, can be defeating. (For a more detailed discussion of super-high-density planting, see pages 52 to 53.)

But our labor, like that of most producers of premium olive oil, is all by hand—and mostly our own two (or four, or six) hands. Because of that, we prune half our trees one year, and half the following, then wait a few years before starting again. While we're pruning, cutting out excess wood that won't bear fruit, nipping back suckers and shoots that spring from the base of the tree, we're also fertilizing, giving each pruned tree a good dose of an organic fertilizer guaranteed to help the tree recover from its surgery and boost it into healthy production of fruit.

"It's not really a tree, the olive, it's a bush, or it wants to become a bush," Gemma Pasquali, my latest (and youngest-ever) olive guru, tells me: Our job as olive farmers, she says, is to keep them from doing that. With a PhD in agronomics from the University of Florence and post-doc work in plant genetics at the University of Florida, Gemma knows what she's talking about. Her own trees at Villa Campestri in the Mugello, north of Florence, are pruned to keep them shapely, to open the inside of each tree to the light, and to make the eventual fruits easier to harvest. And also, she says, pointing out to me one of her elderly Frantoio trees, they are pruned into the vase shape that is traditional in Tuscany, to keep them from degenerating into bushes as they are wont to do. This particular tree was knocked down by the infamous freeze in 1986 that struck olive groves all over Central Italy and extended as far as Provence. "The base didn't die," Gemma says, "but the trunk did and it's painful. You have to wait many years for it to grow back." There are four sturdy limbs now growing from the base where the trunk was cut back after the freeze. They look like four separate trees, though united at the base, and almost 30 years later they are producing plenty of oil.

The olive tree's vascular system, just like that in humans, transports nutrients, in the tree's case from its roots deep underground up to the foliage and fruits; at the same time, carbohydrates formed from photosynthesis are carried from the leaves back down. When the vascular system is damaged—by frost or disease, or by improper pruning—it leaves a wound that can prevent the system from operating properly. The beauty of olive trees, at least for painters and tourists if not necessarily for olive farmers, is in their gnarled and twisted shapes created by age and the afflictions of time. Venerable old olives often split open, hollowing their trunks or giving the appearance of three or more trees growing intertwined, yet within the structure is a single tree, its vascular system continuing to operate on the outside of the trunk, its limbs continuing to bear. "The amount of genetic information in this one tree," says Gemma, "is just amazing." She explains that a tree this ancient is not just a Frantoio cultivar but that it also has absorbed genetic information from the whole population of trees that neighbor it on this high Mediterranean savanna.

Olive trees, icons of the Mediterranean, really want to run wild, and if you don't keep taming them, that's exactly what they will do. I noted earlier that archeologists, looking at carbonized olive pits from ancient digs, find it difficult to differentiate between pits from domesticated olives and those from wild plants, or between wild and feral plants—trees that were once cultivated and have reverted to the wild. The semi-wild trees sprouting on abandoned land around our hill-country farm are telling witnesses to that process. Without the discipline of pruning, their fruit is skimpy, small, and bitter—or nonexistent. It makes me realize that the olive tree is similar to Indian corn (maize) in that it exists in an intimate