



A WINE THAT TASTES OF THE FUTURE

WHAT DOES THE WINE OF THE FUTURE TASTE LIKE? THE SAGRANTINO WINE FROM THE ARNALDO CAPRAI VINEYARD HAS BEEN TRYING TO ANSWER THIS QUESTION FOR SOME YEARS, EXPERIMENTING WITH THE EFFECTS OF THE PREDICTED FUTURE CLIMATE AROUND THE COMPANY'S VINEYARDS IN MONTEFALCO (PROVINCE OF PERUGIA). THE EFFECTS OF CLIMATE CHANGE THAT HAVE BEEN FORECAST FOR THE PLANET FOR THE NEXT FIFTY YEARS ARE BEING RESEARCHED ON THE VINES, IN AN EFFORT TO ANTICIPATE THE CHARACTERISTICS OF FUTURE VINTAGES. LUIGI MARIANI IS AN INFLUENTIAL AGRICULTURAL METEOROLOGIST AND LECTURER AT THE UNIVERSITY OF MILAN, WHO HAS BEEN COLLABORATING ON THE COMPANY'S SCIENTIFIC RESEARCH FOR SOME TIME.

ARNALDO CAPRAI'S RESEARCH PROGRAM IS THE ONLY ONE OF ITS KIND IN THE WORLD, INVOLVING A SIMULATION OF THE EFFECTS OF CLIMATE-INDUCED OVERHEATING OF THE VINES. THE VINE TRELLISES ARE COVERED WITH FABRIC TO INCREASE THE TEMPERATURE OF THE PLANTS. AN ALUMINUM MIRROR INCREASES THE AMOUNT OF SOLAR RADIATION THE PLANTS RECEIVE, WHICH INFLUENCES THE PROCESS OF PHOTOSYNTHESIS. WITH THIS ANALYSIS, THE COMPANY REAFFIRMS ITS COMMITMENT TO THE RESEARCH THAT HAS ALWAYS BEEN AN INTEGRAL PART OF THE COMPANY. THAT IT IS AN "ENLIGHTENED" COMPANY WAS RECENTLY TESTIFIED TO BY THEIR DECISION TO PRINT A SERIES OF FAMOUS QUOTATIONS ABOUT WINE ON THE CORKS OF THE BEST BOTTLES OF SAGRANTINO. AS PASCAL ONCE SAID, "THERE IS MORE WISDOM IN A BOTTLE OF WINE THAN IN ALL THE BOOKS THAT MEN HAVE WRITTEN."

Arnaldo Caprai emphasizes the vines' origins and the environment where they grow.

The grower's respect for territory inspires a work ethic that is mindful of the local Montefalco ecosystem





A R N A L D O
C A P R A I



THE
STORIES

BEHIND A GOOD WINE LIES GOOD RESEARCH



Over the last decade, Arnaldo Caprai has devoted resources to the research of genetic modifications to its grapes to realize a strain that produces quality wine but retains the variability that is the natural characteristic of a vine. It remains committed to the pursuit of innovation and research in the agronomic and enological sector and to communicating the culture and identity of its region... while supporting the local environment

Arnaldo Caprai is currently headed by Marco Caprai, who accepted his father's offer to take over the family business in 1998, shortly after receiving his degree in political science. The estate was already a recognized leader in the production of Sagrantino di Montefalco wine, a prestigious red wine made with Sagrantino grapes. For over four hundred years this variety has grown only in the Montefalco area. In 1990, there were only 400,000 bottles sold. Today, thanks to continuous investment in research and innovation, the sales proceeds have more than doubled – something which is almost exclusively attributable to the product's quality.

In 1970, there were fewer than 10 hectares (25 acres) of Sagrantino vines left; today, there are over 700 hectares (1730 acres). "When I chose to take over the company, only two years had passed since the methanol wine scandal: dozens were poisoned, 19 died, it was a huge blow to the sector," Marco Caprai says. "Today, by contrast, Italy produces 37% less than it did at that time but the quality has increased dramatically." At that time, Caprai and his associates began to survey the Sagrantino vines that had survived in the Montefalco area, and then moved on to cloning. The work was carried out in collaboration with the Agriculture Department of the State University of Milan and care was taken to preserve the different varieties. Since then, about 30 hectares (74 acres) have been dedicated exclusively to research. Every year, 3% to 4% of profits are reinvested into experimentation, particularly toward the development of native varieties.

From 1990 to 1993, the company researched the typical production areas of the vines (Montefalco, Bevagna, and Gualdo Cattaneo), attempting to identify the plants the Sagrantino variety had come from. The project was carried out in conjunction with the University of Milan's Agriculture Department (Istituto di Coltivazioni Arboree) and the Umbria Sitech Technology Park.

This search for the progenitor plants enabled the greatest possible recovery of the natural variety that had been lost through previous mass selections. Presumed clones were derived from these progenitor plants and, in 1994, experimental plots were started with this material in two climatically different zones. After having mapped the DNA to check for possible similarities or differences, the grapes of the clones were subjected to the micro-winemaking process at the Agrarian Institution and Wine Academy of San Michele all'Adige (Istituto Agrario di San Michele all'Adige) in the province of Trento. The characteristics of the resultant wines were evaluated, in order to identify the most interesting group of clones from the point of view of improving the quality of the Sagrantino grape.

Over the last decade, much additional effort was devoted to a project for genetic improvement by clone selection, in order to obtain a quality wine while maintaining the variability characteristic of this varietal.

This initiative was intended to select and propagate the plants that could best satisfy production requirements, as well as the rigid parameters established by the

ONE CLONE IN A THOUSAND MAKES IT

DOCG standard. As a part of this broad program for the genetic improvement of the Sagrantino grape, a project was initiated in 1998 to study the genetic variability of individual plants obtained from seeds present in clusters of ripening grapes, and thus originated through a process of natural self-fecundation. Self-pollination, in the first generations, produces an increase of the variability and the appearance of new morphological characteristics, such as compactness of the bunch

and the genetic makeup of certain productive characteristics of the grapes. This technique made it possible to isolate several interesting characteristics, not only relating to the quality of the product but also to other aspects that are more strictly agricultural. Future study will make it possible to evaluate the ample variability that still is present but not yet expressed, making use of a modern method of genetic improvement respecting biodiversity and naturally occurring selection.

Arnaldo Caprai has been a pioneer in the development of cloning techniques to maximise the quality of the Sagrantino grape

