MASI
AGRICOLA

"AMARONE: THE INFLUENCE OF THE VINEYARD ON STYLE"
Masi Seminar - Vinitaly 1997

Presented by the Masi Technical Group
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INTRODUCTION

Sandro Boscaini

It has become an annual tradition for The Masi Technical Group to present the findings of its research at Vinitaly.

Masi makes no claim that their approach is scientific or that the solutions they propose are definitive or universally applicable. As a specialist company at the forefront of developments in Valpolicella, Masi merely wishes to highlight certain aspects that, in line with the evolution of tastes and production techniques, make the wine ripe for change, without, or course losing its unique identity and personality.

After last year's presentation, which dealt with the relationship between Veronese wines and wood aging, and the preceding one on future developments in the drying process, we aim this year to examine the problems facing the area's standard bearer: Amarone.
There is a widespread and renewed interest in this historic wine, but there is also much debate about its style. There are those who hold uncritically to the wine's mythical reputation and traditions, and others who desire to push innovations to the extreme, even at the expense of Amarone's personality.
The search for "development within tradition" is extremely topical at a time when two simultaneous currents are bringing the indigenous or historic wines of Europe back into the spotlight:
- the concentration on a few international varieties tends to make for homogeneous wines and this in turn has created a growing interest in alternative and, to some degree, "exotic" products;
- there is a new appreciation of red wines in general and of big, well-structured and complex reds in particular.
A unique opportunity has opened up for Italy, with its remarkable treasury of autoctonous red grape varieties, and Verona in particular has been given the chance to position its flagship wine amongst the great wines of the world.
Amarone has already enjoyed notable efforts at modernization by some forward-thinking producers. In general, however, there is still uncertainty and debate as to which style this wine should have. Some fear the loss of Amarone's typicity, and the varied interpretations of the wine's "uniqueness" by others render its development slow and uncertain in view of the lack of official and authoritative guidelines.

Masi, as an historic Veronese producer and specialist in Amarone, and market leader both in quality and volume terms, has for some time now confronted this problem with the belief that the answer lies, in this case more than most, in the hands of the winemaker.
In fact, in few other wines is the winemaker's influence on the product so significant and far-reaching. This is due to the numerous "decisive moments" involved in making Amarone, and the various effects these engender.

In the drying process, which is so important and unique:
- when to harvest
- what percentage of the varieties to use
- how to select the grapes
- how to dry them
- where to dry them
- for how long to dry them

In the winery:
- how to press the grapes
- whether to destem or not
- where and how to ferment
- how long to ferment in contact with the skins
- whether or not to continue the fermentation after devatting, and if so, under what conditions
- how and where to age the wine (this subject was exhaustively covered in the 1996 Masi Seminar).

All theses problems will be dealt with in more specific technical detail.
By the end of this Seminar, it will be clear that the various "crus" from which the grapes come reflect their distinctive soils and microclimates. However, the winemaker can use his skill to avail himself of the innumerable possibilities mentioned above in order to condition or modify the wines' style, thereby promoting the process of development and modernization within a traditional framework.

AMARONE: A GREAT RED WINE INCORPORATING BOTH TYPICITY AND MODERNITY WITHIN THE FRAMEWORK OF THE ITALIAN WINEMAKING TRADITION

Lanfranco Paronetto

Without in any way detracting from the vast array of high quality Italian red wines, one can safely assert that there are three important reds which stand out from their peers for their nobility, fame and richness of structure: Barolo, Barunello di Montalcino and Amarone della Valpolicella.

The production of these three wines is roughly as follows:

Barolo 50,000 hl.
Brunello 40,000 hl.
Amarone 14,000 hl.

We do not wish to antagonize those who champion the causes of Barolo and Brunello di Montalcino by saying that Amarone distinguishes itself from these other wines, both by its long tradition, which is attested to in historic documents which prove its existence since Roman times, as well as by its exclusive and unique production process. This is singular in that vinification takes place in the depth of winter (the end of January), following a drying period for the grapes of some 80 - 100 days in special drying environments.
Today, production of Amarone is divided between a certain number of largish wineries a bigger number of small specialized producers. A recent article in Civilta del Bere/Italian Wines & Spirits, following a large-scale presentation of Amarones at Vinitaly 1996, describes "the patriarchs of Amarone", in other words those firms which may be considered the most important producers of this wine in terms of both quantity and quality. The number of bottles sold in 1995 by each producer was listed in the article.

Masi tops the list not only in terms of quality and specialization but also for quantity. Moreover, alone amongst all the producers, Masi markets four different "styles" of Amarone.
These four wines, as we shall see, are the result of a strategy which, starting from the different original charcteristics imposed by the vineyard (cru), offers products suited to the various requirements of the market by virtue of that highly important quality factor which is represented by the skill of the winemaker. Our intention is to develop a selection of products which, whilst preserving the typicity of Amarone, interpret it in different ways. We might summarize our aims by as "development within tradition", or "from vineyard to style".

1. AMARONE - A VERY PARTICULAR WINE

The techniques of Amarone production were described as early as the fifth century by Cassiodorus, minister to King Theodoric. The fact that it is vinified from semi-dried grapes, together with its other particular characteristics make it immediately apparent that this is a unique wine indeed. Let us examine some of its distinguishing elements:

The area of production

The vineyards used for Amarone production are the same as those in which the grapes for Valpolicella are grown. They are situated in the hills to the north-west and north-east of Verona. The area's climate is mild and temperate due to its southern exposure and the fact that it is protected to the north by the high plateau of the Lessini mountains. A significant indication of the mildness of the climate is the presence of olive trees that grow up to an altitude of around 430 metres above sea level.

All the Amarones produced by Masi comes from Vapolicella's famous and venerable Classico zone.

The grape varieties

The grape varieties used in the production of Amarone are those established by the DOC laws: Corvina, Rondinella and Molinara.
The laws also regulate the percentages assigned to each of these varieties in the blend.
Two interesting points should immediately be stressed about the above mentioned grapes:

- the varieties are strictly indigenous; they are only found in the Veronese area.

- each variety reacts differently to drying (appassimento). Corvina is infected relatively easily by Botrytis (noble rot); whilst Rondinella, with its thicker skins, is decidedly more resistant to fungal development; Molinara comes somewhere between the two.

The production techniques

The production technique includes the following elements:

- The selection of grapes during the harvest. Only the healthiest and ripest bunches, without any trace of damage to the skins, are picked. Generally, the grapes selected for Amarone represent between 30% to 60% of the harvest, depending on the year.

- The arrangement of grapes on special traditional racks or in more convenient, stackable and easily transportable wooden crates. Both the racks and the crates are positioned in large, well-ventilated rooms, thereby prohibiting the development of common molds.

- A 60 - 100 day drying period. During this time, the grapes laid down in the drying rooms are vulnerable to the development of fungal infections, no matter how carefully they have been selected and supervised. The berries may be covered by a veil of humidity or the skins may have become broken. This can result in the discharge of juice - great food for molds!
It is vital that the development of rot should be that of the noble variety (Botrytis), which favours a whole series of transformations within the grapes. These changes encourage the development of characteristic perfumes and flavours.

On the other hand, the development of grey mold, that is to say common rot, is prejudicial to quality and at the same time causes problems during fermentation and with the stability of the future wine. If grey rot takes hold, one must curtail the drying period. It is self evident that cold temperatures and fairly low relative humidity are conducive to successful drying, whereas humid years or environments favour common mold. The conditions in which drying takes place are decisive for the quality of the finished wine. They can be controlled using traditional devices , such as careful choice of the site where drying takes place (usually hillside farmhouses are most suitable for this because the prevailing conditions are cooler and less humid), or alternatively, by using more modern solutions involving partial or total conditioning of the drying environment.
The various particularities and problems involved in this process have already been researched and studied by the Masi Technical Group. Our findings have been presented at Vinitaly on several occasions and, the 1995 Masi Seminar in particular was devoted to this theme.

- Vinification in winter. Vinification takes place in a cold environment (it is January) and this naturally affects maceration and fermentation. Maceration therefore lasts some 40 - 60 days and fermentation can go on for several months longer.

The characteristics of the Wine

The unusual production procedure briefly described above yields a wine which is of undoubtedly high quality. The concentration of the grape's constituents, the transformations caused by Botrytis, the conditions during maceration and the long fermentation all contribute to the development of a wine that is extremely concentrated, deeply coloured, powerful, highly alcoholic and velvety in texture. However, it is a wine that is never excessively tannic. Its attractive aromas combine suggestions of dried and cooked fruit and of fruit soaked in spirits. It is certainly unique.

2 - THE PROBLEMS OF AMARONE

With its long and tradition-rich history and its unusual production techniques, Amarone stands at the summit of the range of fine quality wines from Valpolicella which has admirers throughout the world.
However, one must come to terms with some of the general problems to which Amarone is subject and find, at least in principal, some new solutions which will provide the guidelines for a further improvement in quality.
The main points to keep in mind are as follows:

"Reciotato"

In order to understand what is meant by "reciotato", we must go back to the traditional maxim whereby Amarone was considered the result of an particularly "difficult" year or of serious errors in winemaking, rather than a style which was deliberately sought after and desired.
Indeed, the technique of semi-drying was originally destined for the production of Recioto, a wine highly prized for its sweetness as well as its high alcohol and its intense, cherry-like fragrance.

Recioto was and still is drunk young. However, the transformation and the combination of the sugars, a slight oxidation, the contribution of the gluconic acids produced by Botrytis, together with the numerous enzymic, chemical and biological reactions that occur during production and storage, give the wine specific
organoleptic characteristics which, whilst difficult to describe, are well recognized by consumers of this wine. These characteristics can be defined very roughly as reminding one of something between Port and Vin Santo in style, with definite caramelized sugar notes and with a touch of sweet spiciness. This
is what is meant by "reciotato".
This style may be interesting and appreciated in a wine drunk with dessert or even consumed outside meal times, as is Recioto. On the other hand it is less congenial in an Amarone, a wine that finds its ideal setting within the context of a meal.
In fact, it is not unusual to find very disparate judgments on Amarone: it may be greeted with surprise and lavish praise or more coldly and with reference merely to its "unusualness".
The quality of "reciotato" decidedly takes Amarone out of the international context in assessing great red wines and this characteristic, although it has its admirers, can present an obstacle to the wine's more general appreciation.

The myth
Alongside that of "reciotato", Amarone's other major problem is that of an over-zealous exaltation of its qualities and characteristics.
Its original production technique, its limited availability, its organoleptic exuberance, and its long and exclusive tradition have, quite rightly, given Amarone the fame that it deserves. At the same time, however, a certain amount of exaggeration has contributed to the construction of a myth which only a few can grasp or comprehend.
This situation may be compared to that of vintage cars. Classics such as a 1938 Ford V8, a 1936 Mercedes 540K or a 1928 Torpedo Series Lancia Lmbda 8 are certainly vehicles that have achieved mythic status and stimulate the imagination, but whilst they are fine for collectors' meetings and for occasional ceremonial use, they are less well suited for driving in modern traffic.
Therefore, the exaggerated emphasis of certain characteristics (which are undoubtedly original and interesting), and the continued celebration of the Amarone myth limit the occasions on which these wines are drunk and also hold back producers from making further advances in quality.

The technical problems

A. Drying
During the brief explanation of the drying technique we touched on the importance of Botrytis which must develop as "noble rot" rather than evolving into grey mold. Indeed, a not particularly good vintage can be "saved" by the drying period or, conversely, a good year can be ruined and rendered mediocre. (This is the reason that the rating for an Amarone vintage does not always coincide with the general evaluation of the year for Valpolicella.)
The control of the rate and form of development of Botrytis remains a major problem for its effects both in terms of quality and costs: a problem that has not entirely been resolved.
Studies have revealed, as we have said, some important differences between the behaviour of the different varieties during drying: Corvina is extremely susceptible to Botrytis; Rondinella on the other hand has thick skins and is therefore less vulnerable, whilst the Molinara demonstrates intermediate characteristics.
Other research into the inhibition of the development of grey mold has examined experiments with "artificial" drying using special air-conditioned rooms. But the wine in these cases differed too much

from the original style which may, of course, be given a more modern interpretation, but whose nature must on
no account be changed.
Artificial drying as it was conducted in these studies also prevented the development of noble Botrytis which is essential in contributing many of Amarone's distinctive characteristics. In addition these artificially dried grapes took on unpleasantly bitter flavours. In short, we are still a long way from a satisfactory solution.

B. Fermentation
Fermentation is very difficult because of the low temperatures at which it takes place. Also, owing to the high sugar content that develops during the drying period, it takes a very long time and does not always yield optimum results. It has been ascertained that the environmental conditions favour the development of a yeast which is not usually found under normal operating conditions in October: Saccharomyces uvarum. When the alcoholic concentration begins to exceed 13% alc. vol. Saccharomyces uvarum is replaced by the more familiar Saccharomyces bayanus.
The microbiological situation is not, in reality, that simple: the species present are various, and each one is composed of numerous individual strains with different and not always positive characteristics. The effects of nitrogen supply, which is very important for the completion of fermentation, in order to avoid organoleptic defects and guarantee the successful development of the wine's potential characteristics, have yet to be studied.
The extreme slowness of the fermentation, in conditions that are not always perfectly hygienic either in the fermentation vat or in the ageing barrels, sometimes favours the development of bacteria with occasionally negative consequences.
Generally, one can say that the handling of the fermentation, which is very important and indeed crucial in determining the quality of the final product, is still very hit-and-miss.

3. IMPROVEMENTS IN THE QUALITY OF AMARONE

In light of its long and tradition-rich history and its unmistakable style it is not easy to confront Amarone's problems.

Some timid attempts have been made:
- by the introduction of some non-indigenous vines.
- by the control of the drying process using "air-conditioned rooms"
- by temperature-controlled fermentation
- by the use of barriques for ageing.

Some, less suitably, propose a shorter drying period (40 - 60 days) thereby reducing the concentration of the grapes and lowering the alcohol and thus producing, they say, a wine of easier drinkablity.
These are all suggestions for change - some of them are very limited in their scope, some of them clumsy, some of them "cunning" because they mask ends that are not entirely quality-driven. In every case, however, one sees on the one hand a need for improvement and on the other hand a lack of valid alternatives and therefore resistance to going down an uncertain road.
Once again we are aware of the absence of "official" experimentation which might yield a series of concrete proposals that producers could then seriously put into effect.
The result is that each producer is entirely free to give his or her own interpretation to the improvement in the quality of Amarone. Basically, it is a slow, disorderly and somewhat dangerous process but in this way the common experience can be judged and put to good use. The marketplace

will then reward those products that veer least from tradition and are most suited to modern tastes. This is, however, a long and uncertain route.
I believe, however, that a brief consideration should be made on the methods and logical steps to be adopted in order to obtain the desired improvements in quality.
The first step involves reflection and a serious analysis of the characteristics of Amarone: characteristics that substantially derive from a singular raw material and from a methodology of production and preparation which is equally unique. It is essential to state clearly (as I have done earlier) that this tradition must not be tampered with, but rather be defended as a precious heritage worthy of protection and made the most of. The tradition should be a solid basis for each improvement. At the same time we must not remain prisoners of the Amarone myth and must examine the subject with due calm.

The second step must establish more clearly the most significant technical aspects which influence the characteristics of Amarone and how each of these technical modifications will influence the organoleptic qualities of the wine. Amongst the most important possibilities to consider are:
- The procedures and the consequences of new drying techniques
- More rational ways to carry out vinification

4. MASI'S AMARONE: FROM VINEYARD TO STYLE

Discussion about the proper evolution for Amarone began several years ago at Masi. For some considerable time, in fact, Masi has had on the market four different styles of Amarone, coming from different vineyards, which naturally represent the characteristics of the areas where the grapes are produced.

MAZZANO is an Amarone which comes from the area of the same name, one of the highest zones in Valpolicella (between 350 and 415 meters above sea level). The vineyard has an western exposure (lying north-east to south-west) and follows in part the contours of the hillside. The terrain is of brown soil on Cretaceous marl. The slope is very steep, but is made manageable by terraces supported by dry stone walls (marogne).
The drying takes place in a drying shed at the vineyard, without any artificial conditioning of the environment. The grapes are laid out exclusively on bamboo mats (arelle). The grapes generally dry until the second half of January.
The resulting wine has great structure; it is noble and austere, with a fine balance of tannins and softness. Its style eschews the opulence and unctuousness of "reciotato".

CAMPOLONGO DI TORBE, comes from the vineyard of the same name, in the hamlet of Torbe, in the commune of Negrar (between 375 and 400 meters above sea level). The vineyard exposure is south-west
(lying north-south). The terrain is of red soil on Eocene limestone. The gradient is medium-steep with wide terraces supported by natural embankments and dry stone walls (marogne).
Drying takes place nearby in drying sheds equipped with ventilators. The grapes are laid out on bamboo mats (arelle) as well as in wooden crates. They dry generally until the first 15 days of January.
This Amarone is soft and velvety with a very distinctive characteristic: that of being "mandorlato". There is a marked perfume of bitter almond and cherry stones that we find echoed in the well-balanced flavours on the palate.

VAIO ARMARON. The grapes come from the small valley of the same name in the hamlet of Gargagnago, in the commune of Sant'Ambrogio (between 180 and 265 meters above sea level). It is one of the most prestigious historic crus of Valpolicella Classico and is a part of the Serego Alighieri estate. The exposure is south-west with the rows facing in various directions. The terrain is of loose, light brown soil of medium depth and containing few organic substances.
The drying takes place in the lofts of the outbuildings of Villa Serego Alighieri, which are equipped with ventilators. The grapes are laid out on bamboo mats (arelle) as well as in wooden crates. They generally dry until the middle of January.
It is the most traditional of the Masi Amarones. Here one can find the famous "reciotato" that many appreciate and that can inspire surprise and admiration.

AMARONE CLASSICO. The grapes come from different hillside vineyards and are dried in sheds at various sites, which are equipped with ventilators. Before they are dried, the grapes are left for 36 - 48 hours in controlled atmospheres and under ventilation. The pressing takes place normally in the first half of January.
The wine shares the general characteristics of Mazzano, that due to its nature presents more modern traits and is more attractive to those who wish to consume Amarone with a meal. The wine is robust yet soft and velvety. It is a typical Amarone, yet without any trace - or hardly - of "reciotato".

Taking as a point of departure the "natural and traditional" characteristics of these Amarones our attentive research into the different styles of wine coming from the various "crus" has led us to certain conclusions and has suggested certain paths to follow in oder to achieve "intelligent" improvements.
The differences in the origin of the grapes remains as a heritage of the soil and of the microclimate, and cannot change, but the differences derived from different drying conditions and from small but significant changes in the "elevage" of the wine can be made greater or smaller by the skill of the winemaker.

The discussions engendered by our research has suggested some experiments, with which to examine the technical adjustments necessary in order to make the changes we are seeking. These experiments are still going on and the results we have obtained thus far are certainly not definitive. Our work continues, but the conclusions we have reached are starting to bear their first fruits. Undoubtedly, Amarone Classico should be a more modern wine, so that it can compete more effectively on the international market with great red wines from around the world.
Careful restoration is revealing shades of light and colour only heretofore imagined; the skill of the winemaker is bringing them forth, thereby making a legend into reality and rendering it accessible to wine lovers in every part of the globe. Our mission is already under way. It is that of development within tradition: from cru to style!

THE EXPERIMENTAL WINES FOR TASTING

Sergio Boscaini

Our Technical Group has conducted experiments over many years designed to better define the styles of our Amarones and, in general, to give a more modern flavour to this flagship wine.
In particular, after an initial and by now somewhat forgotten classification of the various crus which took place in the late 1960s, we have concerned ourselves (and continue to do so) with making improvements in the drying process, in vinification and in aging.

With regard to drying we have examined the various factors:
- systems (traditional, technological, and integrated)
- methods (wooden crates, mats, etc.)
- locations (high hillsides, foothills, and plains)
- duration of drying

With regard to vinification, we have experimented particularly with:
- fermentation with or without stalks
- different durations
- indigenous or selected yeasts
- different containers

With regard to aging we have experimented with:
- different types of wood
- different sizes of barrel
- different periods of aging

In particular we have examined the evolution of the style of Amarone in relation to the techniques employed.

The samples presented are four 1995 Amarones, with specific reference to the place where the grapes were dried. The grapes of two of these Amarones were dried at the vineyard, and their style is partly determined by the greater or lesser level of Botrytis caused by the climatic conditions prevailing where drying took place. The other two wines are made from grapes from the same source, but deliberately dried both at a high hillside site and at another site in the foothills. The variations in style confirm how, using the same grapes, the place where the grapes are dried is of vital importance in determining the style of the wine.

APRIL 1997
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