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## WINE W RLD MAGAZINE

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## IDEAS, EXPECTATIONS AND FEARS OF PRODUCERS AND INTERNATIONAL MARKETS GENETICS VS. CLIMATE CHANGE Who Will Gain the Upper Hand in the Vineyard?

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Climate change and the quest for more sustainable production methods are speeding up innovation in the vineyard. Our experience working with hybrids can still teach us something: the near future between PIWI varieties and new genomic technologies, which have nothing to do with GMOs. Both solutions will be useful in the future for a Wine making that will change a lot in the next 10-20 years, as told by our reporting from producers in Italy, Spain, Germany and Canada, and the PIWIs' market presence in Sweden and Japan. Hopes and expectations meet with fears and resistance, but the urgency to save the vineyards will ultimately prevail. We will have to see how



- umans are innovative by nature, even when it { PiWi, from the German *Pilsenwiderstandfähig* (fungus-resistant

comes to viticulture. It is necessary in our modern times because of our increasingly changing and unpredictable climate, and to better protect \_ our planet.

After having concentrated for decades on perfecting cross-breeding techniques, some already used centuries ago, current research has reached a turning point, which has yet to take shape in the vineyard but is already showing great potential.

Since the 19th century, breeders have been working with crosses involving different varieties, such as Pinotage or Müller-Thurgau, or distinctive species, from Baco Noir (Vitis vinifera with Vitis riparia) to Othello (V. labrusca x V. riparia x V. vinifera). For the past 60 years, they have been targeting their efforts on improving specific plant characteristics. vines) were born thanks to long and precise hybridization work carried out through hundreds of generations of successive crosses. This produced varieties with a natural resistance to the most common vine diseases.

Still not widespread and remaining at an experimental stage, Pi-Wis have nonetheless started being planted and some countries have even approved them in their appellation systems. Due to a lack of knowledge on how to handle them effectively in both the vineyard and winery, they sometimes carry limits from an organoleptic standpoint.

With names such as Solaris, Souvignier Gris, Regent or Cabernet Cortis that often recall their parent varieties, they are making their way mainly as complementary grape varieties. They are used in minimal percentages to reduce treatments' footprint in the

Continued on Page 2

figures than the already negative ones released in March. The impact of destocking in North America added to the chronic hardships of China



## HOW THE U.S. WINE MARKET IS EVOLVING



BIG CHANGES FOR IMPORTERS AND DISTRIBUTORS. The Power Balance Is Shifting as Consumers Dropped



## THE FUTURE OF WINE MAKING

### Continued from Page 1

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vineyard, without compromising the final result. A few producers and operators believe they should play a bigger role.

While working on this report (see the focus on the following pages), we discovered some comforting news from small but valuable markets such as Japan and Sweden, which focus their attention mainly on taste yet are also sensitive to environmental considerations. With the longest and most interesting experience dealing with hybrids, partly because of the need to resist low temperatures, Canada sets an example to follow. Our investigation revealed that Vitis vinifera are in fact still a guarantee of greater added value. In Germany, from where the term PiWi originates (although France might have developed these vines first and in greater numbers) there is still indecision around them. The fact that some large players of the industry, even producers, have been embracing PiWis should encourage smaller producers, currently closed to the idea, to do the same.

France and Italy are the top two producing countries in the world and the most advanced in terms of experimentation with PiWi. While the French have been working with these varieties for some time, and have even allowed them in some of their appellations (Bordeaux and Champagne), Italy is still dragging. The limit of PiWis' entrance in its appellation system is the main roadblock. Yet the advanced expertise the Italians can boast in the field of Nbt/Ngt, with the Crea state research institute and some universities, could soon make a difference.

New Breeding/Genomic Technologies are the natural evolution of cross-breeding techniques. In practice, instead of making dozens and dozens of crosses between varieties or between different species, trying to select the gene of interest (like resistance to downy mildew) and hoping not to lose any positive ones (like specific aromatic notes), modern technologies allow us to pick and choose the genetic heritage of a given variety to obtain resistance to a specific fungus without compromising the remaining genetic heritage of the variety. Assisted evolution techniques known as AET are the last frontier in terms of innovation in Italy. They can speed up a plant's evolution process which previously required years of cross-breeding and thousands of repeated attempts. Despite some confusion, these plants are not GMOs as they do not include the DNA of any foreign species in their genome. European legislation has recently permitted field experimentation of AETs in Italy. More than ever, the future of viticulture can and must be greener and PiWi and Nbt/Ngt/AET are clearly there to help. G.S. - F.B.

# **GENETICS** and the **FUTURE** of **VITICULTURE**

With climate change getting worse, the viticultural landscape as we know it will certainly evolve a lot in the next 10 to 20 years, bringing forward a new untapped viticultural biodiversity hitherto unknown. A change that should not be feared, on the contrary. Alongside agronomic, technological or plant-support solutions such as natural biostimulants, genetics offers two types of products- some already in use others pending-, to help achieve Europe's Farm to Fork objectives: Disease-resistant plants obtained through cross-breeding (known as PIWI) and plants with accelerated natural mutagenesis obtained through new sustainable biotechnologies (known as TEA). Both solutions should make their mark as they are not mutually exclusive but complementary

> By **RICCARDO VELASCO** Director of the Viticulture and Oenology Center at Italy's Research Council for Agricultural Research and Economics (CREA)





## INTRODUCTION TO THE GENETICS OF SUSTAINABILITY

As in all things, in media stat virtus (The truth stands in the middle). There is no magical solution to the problem. Only a rich and complex series of interventions, managed at a territorial and microclimate level, will help us win the battle for a cleaner agricultural sector.

The first positive interventions have precisely come from the farmers' sensitivity and love for their land. Agriculture keeps asking science for solutions. The latter helped production increase tenfold in the last 150 years, with products of the highest quality which benefited Italian agriculture - one of the richest in the world-, both in terms of biodiversity and nutritional values. While genetic interventions have been leading research in the agri-food sector, contributing to over 50% of the qualitative and quantitative production brought by the two green revolutions of the turn of the 20th century and the 1950s, they were much less frequent in the viticultural sector. This is mainly due to an enduring scepticism associated with the creation of new improved varieties, but also because of a lack of effective tools compared to the cereal or vegetable crops sectors. With the evolution of genomics and bioinformatics, these tools are now available, and the genetic improvement of vine varieties is no longer

stalling. The pioneers of the last century have already designed good oenological varieties with improved genetic resistance to major fungal diseases such as downy mildew and powdery mildew, allowing us nowadays to focus on improving primarily the organoleptic characteristics of these grape varieties.

Although viewed with scepticism by oenological purists (not without good reason), the first resistant genotypes appeared in the central European vineyards of Germany, Austria and Switzerland as early as the 1970s. These new varieties, bred in decidedly different climates than the Mediterranean or other more territories suited for viticulture with terroir and long tradition, did not initially receive the attention they deserved. Their rusticity and resilience to disease and climate were accompanied by some qualitative limitations, worsened later by a lack of knowledge in their vinification.

solutions, especially fungicides. A drastic reduction is therefore inevitable and will require an important shift in vineyard management paradigms.

Alongside agronomic, technological or plant-support solutions such as natural biostimulants, genetics offers two types of alternatives to solve the problem and help Europe attain its Farm to Fork objectives: (i) plants that are autonomously resilient to diseases obtained by cross-breeding, the so-called PiWi, and (ii) plants whose genetic characteristics are mutated as they occur in nature, the so-called Assisted Evolution Techniques (AET), where natural mutagenesis is accelerated through new ecosustainable biotechnologies. Some products are already available and more are to come.

## WHAT ARE RESISTANT VARIETIES AND HOW THEY ARE OBTAINED

Since the beginning of the 20th century, agronomic and chemical solutions were developed to save European viticulture from diseases such as phylloxera, botrytis, powdery mildew and downy mildew coming from the Americas. The production through genetic improvement of

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## Italy

'hybrids', i.e. crosses between American species (pollen donors) and European vines, produced plants, which similarly to their New World parent, were able to coexist with these diseases. Living with these diseases had caused American vines to develop a genetic resistance against local pathogens. The challenge lay in obtaining through cross-breeding (a process similar to cross-pollination done by bees) daughter plants that would give a "decent" wine, but carrying the great advantage of being fungus resistant. The many defects found in the wines made from "directly-produced hybrids" quickly sealed their fate even after they managed reaching significant production levels (Up until the 1960s, France cultivated over 600,000 ha of hybrids). In some pockets of central Europe, cross ings did however continue for many generations, lowering more and more the genetic pool of American species while enriching by 50% the plants' genetic

ropean vines with each successive generation. This led in the 1970s to the first resistant varieties such as Prior and Souvignier Gris (now with a genetic heritage almost entirely of European vines) to get registered in Germany. These were followed by other resistant vines such as Regent and Cabernet Cortis, which had a limited diffusion in central Europe. Further work in Hungary, Czechoslovakia, Switzerland and Austria produced interesting vines with important pedigrees that eventually gained popularity in Italy, especially in Alto Adige and Trentino. By studying the best way to cultivate them and above all vinify them, today these vines produce wines fetching respectable prices.

background with that of Eu-

The first working group dedicated to hybrids was founded in Germany at the end of the 1990s under the name PIWI, from the German Pilzwiederstandfähig, meaning able to resist fungi, specifically downy mildew and oidium. Evolving into a real club, the 'PIWI international' trademark was later registered in 2004. Further cross-fertilisation activities, especially at the University of Udine, in collaboration with the Institute of Applied Genomics and the Rauscedo Cooperative Nurseries, eventually produced the first resistant vines born in Italy, which were soon followed by those from the E. Mach foundation of San Michele all'Adige.

Between 2009 and 2014, 20 hybrid grape varieties were finally registered on the National Vine and Wine Register (RNVV) and allowed into production (Fig.1). Of these figured the first 10 European and the first 10 Italian genotypes. This is not so much the result of an increased popularity for these varieties, but the consequence of rising public health concerns leading to the European Farm to Fork programme, which aims to reduce by half the amount of pesticides allowed in local produce - most resistant vines require 80%

## HECTARES CULTIVATED IN ITALY IN 2020, A COMPARISON BETWEEN RESISTANT VINEYARDS VS TRADITIONAL ONES



Data from 2020 Tot. surface of resistant vineyards: 626 ha Tot. surface cultivated in Italy: 668,000 ha 2021 Estimate: 1,050 ha 2022 Estimate: 1,400 ha

2022 E From top left, Soreli apes and Pinot Iskra new resistant hybrid varieties are scheduled to be added to the 36 varieties already registered in the RNVV (16 more have been added in the last 10 years). Some are completely new, while others are very similar to their original 'mother' plant selected from Italy's main native varieties (Glera, Sangiovese, Primitivo, etc.). These plants will be immediately available once they enter the regional registers and obtain the proper certifications (usually two years of production). As the number of permitted hybrid varieties rises, many Italian regions are getting ready for their cultivation (Fig. 2). The ones closest to native varieties should offer a wide choice adapted to most of Italy's traditional territories.

It generally takes between 12 and 15 years before a registered variety is obtained, but the number of resistant varieties will grow exponentially.

The main goal of biological mutagenesis is to obtain new plants from mutated varieties that should be recognised as new clones of existing varieties. While crosses produce new varieties with unique and unrepeatable DNA, mutations (of whatever nature, random, biological or chemical) produce clones of existing varieties such as Chardonnay, Sultanina, Pinot, Nebbiolo, Crimson or Brachetto. Soon all the main varieties (Glera, Garganega, Corvina, Primitivo, Aglianico, Italia, Vittoria, etc.) developed in 5-6 Italian research centres and universities should also start producing their own clones.

At this point, the limitations are mainly legislative and experiential. Crossings improve with experimentation - the more experiments the more successes.AETs, on the other hand, depend on European legislation, which currently relegates them among GMOs, preventing their pro-





natural mutations (see Wine Courier no.10/2023). This technique was discovered by "chance" by two scholars, Jennifer A. Doudna and Emanuelle Charpentier, winners of the 2020 Nobel Prize in Chemistry, while they were studying viruses and bacteria. They singled out a protein called Cas9 able to recognise and cut off a virus' DNA sequence (Crispr), preventing it from attacking its host bacterium. Once it reaches the desired location given the necessary information, the Cas9 protein is able to recognise and cut DNA sequences in all living organisms. Once that's done the cell will adjust its DNA in order to survive. In most cases this leads to mutations that accelerate its evolution. Hence the name Assisted Evolution Techniques. AET biotechnologies allow targeted biological mutations (via the Cas9 protein) by pinpointing specific genes responsible for a certain activity such as a resistance to a disease or an increased ability to absorb water or nutrients from the soil. There are however some limitations such as knowing which genes to work on exactly, being able to work in vitro on the varieties of interest, or how to regenerate a whole plant from a mutagenised cell. To date, scientists are only able to work on a few resistance genes. Many more would still be needed to increase lasting resistance or plant quality and capacity. Molecular genetics will have to provide more information, but the first new plants are already available. A lot of work still needs to be done in the field of in vitro cultures. Interventions work on some varieties, but many plants are still not receptive. The regeneration of whole plants from single cells have been achieved with a few varieties. The objectives are clear: improving yields and increasing the number of varieties.

duction and dissemination for commercial purposes. Research centers are currently working on obtaining, with all necessary precautions, authorisations for field experimentation, although these plants are not considered true GMOs.

In most of the world, except Europe, mutated plants obtained through AET are considered similar to those obtained by cross-breeding or clonal selection. Sooner or later, even Europe will allow growing them and will start making wines similar to those made with their original plants. Once these clones get public approval, the first to benefit from them will be organic producers. Traditional producers venturing in that direction will also require less treatments in their vineyards, reducing by far their interventions in the field. Both technologies follow the European strategy to reduce the use of pesticides, and both will make their mark. They are not competing techniques but two separate options targeting, on the one hand, producers who prefer to work with clones closer to their original traditional plants and those, on the other hand, that prefer experimenting with new daughter plants offering new characteristics for which they were selected for (as similar as possible to the mother plant or with an autonomous profile). The viticultural landscape as we know it will certainly evolve a lot in the next 10 to 20 years. bringing forward a new untapped viticultural biodiversity hitherto unknown thanks to more performing clones and new varieties. These important innovations will support and equip more traditional methods with a much wider offer, that should not worry environmentalists. "Au contraire", would say the French, who have already authorised new clones obtained with AET in the specifications of their AOCs (our DOPs).

less pesticides or copper and sulphur levels compared to traditional international and indigenous varieties.

Italy is currently working to develop a national genetic plan selecting its most representative autochthonous vines. It should use them as pollen-accepting female parents of the latest generation resistant varieties to get offsprings as similar as possible to the mother plant, but carrying a genetic heritage making them disease resistant for as long as possible.

The Council for Agricultural Research and Economics (CREA) has set up several plans to produce daughter plants of Glera, Sangiovese, Primitivo, Falanghina, Aglianico and other national varieties. The Rauscedo Cooperative Nurseries is also continuing its production of new varieties of Pinot, Glera, Sauvignon, Sangiovese and other varieties of national interest.

This year PIWI Italia became the latest of 16 EU members of the PIWI International association, and will collaborate to the dissemination, decision support and oenological advice on PIWI varieties. Moreover, Italy already counts numerous regional associations set in regions that have adopted some or all of the resistant varieties registered on the RNVV, such as PIWI Piedmont, Lombardy, Veneto, Friuli, PA Bolzano and PA Trento, (we hope soon Emilia Romagna, Marche, Lazio). A synergic collaboration will be necessary to de-

A synergic collaboration will be necessary to definitively overcome the scepticism around these varieties in Italy. At the moment, they are only authorised for the production of table wine or Darwin discovered this over 160 years ago. Evolutions are random, because they are based on mistakes in reading the genetic heritage enclosed in a molecule called DNA, which is full of "errors." Most of these errors are harmless, while some become harmful. Yet in rare cases, some actually become ecological advantages (or economical advantages in terms of business opportunities). Positive mutations may include the ability to resist a disease (or rather the pathogen that causes it) or provide the increased ability to absorb water or nutrients from the soil. Another useful outcome may be seeds carrying more proteins or berries with more nutrients. All these mutations can naturally occur randomly.

ognized within the specifications of the nation-

al DOPs once their oenological qualities are con-

firmed. France, Germany, Switzerland, Denmark

and other nations have already authorised them.

Why completely block their use now that their

oenological quality has improved so much? In

small, regulated percentages they could actually

bring some improvements to the wines, without

distorting the dominant profile of the main tra-

**ALTERNATIVES FROM ASSISTED** 

**EVOLUTION TECHNOLOGIES (AET)** 

In parallel to the plants obtained by crossing, to-

day we have the possibility of applying advanced

technologies capable of speeding up the evolu-

In a nutshell, nothing in nature is stable. Spe-

cies are born, evolve and disappear continuously.

ditional varieties.

tion of species.

While breeders have throughout history selected the best and most useful plants, waiting for them to generate random mutations turns out being uneconomical. For a few decades, it has been possible to accelerate these mutations with X-rays and chemical (mutagenic) means, thanks to a process called Assisted Evolution Technologies (AET). Products obtained through this method have been available on our tables for a while now. The law regulating GMOs even admits induced mutations and recognises their usefulness in increasing biodiversity.

Today's AET biotechnologies can accelerate mutations and limit their approximation. Unlike GMO technologies that act in a fairly random manner and can even combine genes from different species, AET biotechnologies based on the Crispr/Cas technique practically compare with

## Timing, legislation and conclusions

More and more resistant and more and more interesting from a qualitative standpoint, a dozen

## France

## **CONFUSION ON GMOS STILL OCCUPIES THE NATIONAL DEBATE**

## Is It Too Early for GENOMIC **TECHNIQUES?**



s soon as the "genetic" term walks through the door, it's quite the beginning of a big scare. It's a fact, GMO (genetically modified or-\_ganism) has been outlawed in European countries since the beginning of the 2000s with the famous 2001/18 guideline.But, this summer, the European Commission authorized a new kind of experimentation on a so-called AET (assisted evolutionary techniques) in some countries, and a NBT (new breeding technology) or eventually NGT (new genomic techniques), in some others. By the way, the three acronyms are defining about the same process. And decoding the genes of the vine is no more a fantasy.

"NBT or NGT are fantastic research tools," said Loïc Le Cunff, an engineer specialized in molecular technology and working for IFV Montpellier based institute, the very famous Institut Français de la Vigne et du Vin, usually considered as worldwide leading experts. Until now, in Europe, the 2001/18 directive was defining "what a GMO is. Yet, in this guideline it was the skill acquisition which qualified a GMO or not. But, since 2001, new research tools have emerged, the NGT/NBT," Mr. Le Cunff said.

Amongst these NGT, there is the sequencing of the genome. And it can very much change the way of talking about these genetic topics. In the world, responses about NGT are somewhat different from one country to another.

"In Brazil or the United States of America, they consider that using these genomic techniques do not produce GMO but conventional plants," he added. "In Europe, it has been first determined that the 2001 directive still prevailed. But recently, everything has been reevaluated. Now, the European Commission is looking at this question with a new angle: is there any possibility that this organism obtained with NGT could have existed in nature?"

## The European Green Deal

Mr. Le Cunff's question is a good one that reminds us that everything on earth is the product of genetic mutations, and we are not only talking about millenary modifications. Generation after generation, things are changing, even for the vine. "In 2007, the genome of the vine was decrypted," he explained. "Now, we know precisely where all the genes are, and there are around 30,000 of them! The only problem is that, actually, we don't know the exact function of each one of them. So, with the new research tools, it would { Loïc Le Cunff

## By CHRISTOPHE ANDRIEU

Whereas genetic research with new tools will be authorized, the new genomic techniques (NGT) also called new breeding technology (NBT) do not seem to be considered in France in the near future by the national viticulture decisionmakers, even if molecular scientists expect a lot from these new techniques in terms of the functions of the genes in vines





**Jacques Gautier** 



**Marie-Christine Dufour** 

be easier to understand these functions. It's an

"Well, actually, the French viticulture sector has no request about the NBT topic," Mr. Le Cunff added. "In France, we are more focused on more classical breeding, I mean with sexual reproduction which is made without GMO and which isn't obtained by using NBT. And the goal of this more classical breeding is to find new resistant varieties to mildiou, oïdium or black rot by responding to environmental constraints."

## **A Political Decision**

And the point of view of the national inspector of INAO (French national institute of origin and quality for all the appellations), Jacques Gauti**er,** is clear and simple.

"Until now, we don't have any position in this project," he said. "Actually, in France, there is no GMO cultivation."

Of course, it sounds more like a politically correct position, but it is also a reality that the topic isn't very fascinating for wine growers.

"This NBT topic is quite complex and we can understand the questions asked by the public at large," he said.

When we try to have some answer about this very new topic, it's quite difficult to find people aware or at least interested in NBT/NGT possibilities in the field of the French appellations. In Bordeaux, technical engineer of CIVB, Marie-Christine Dufour has been one of the rare to take a position.

"It's more a national point of view," Ms. Dufour said. "We don't actually have this kind of debate in our production areas."

By saying that, we could make a final conclusion with a definitive answer. Nobody seems to be interested in new possibilities in the genomic field. But it's not as simple.

"Actually we need time to find the right resistant genes," Ms. Dufour said. "We need some twenty years with our classical cross breedings. We begin with approximately three thousand seeds and when we obtain one or two resistant varieties, we are very happy. Of course, it's a lot of energy, all these processes are interesting but



incredible tool, it will accelerate our knowledge." To know the genome better is one thing, to act on it is another.

"Yes, but with this access to genomic information, the ability to understand the functions of the genes will permit us to select varieties able to handle the challenges of viticulture," Mr. Le Cunff said.

In a few words, new research on resistance will run faster in the future. Of course, some goals must be first determined and a framework set. "Naturally, the characters we will work on must fit in the 'European green deal," he said. "E.g. The main goal is to help nature by reducing water resources or the inputs."

And there is a substantial question to answer: will these researches using NGT/NBT and the new mutations will give "an added value" in terms of green deal? But this question may be completed by a more practical one: are we able to develop right now these kinds of new researches? The scientist specialized in genomic vines is not so sure.

"Actually, we're probably not totally ready," Mr. Le Cunff said. "We have to visit again some forgotten fields like the complete mastery of in vitro culture protocol of the vine."

And the first step will be the identification of the most important genes, those that will seriously reduce some inputs like fertilizers or the water use. By the way, the program sounds, at least, hopeful and may interest a lot of French viticulture decision-makers.

not very well targeted. With NBT, naturally, we can assume that the processes could go faster. It would be a good tool to find in an easier way the good variety in terms of resistance but also in terms of organoleptic qualities."

Indeed, if one day we are able to target precisely the kind of genes interesting for these goals (resistance, organoleptic, environmental impact), it will be like running upstairs instead of walking step by step.

"With a normal breeding procedure, we have to choose two parents and we hope that children will look like their parents," she said.

And it's not always the case. Actually, good surprises are very often at the end of the road, but sometimes it's not and it can be many years of hard work for nothing.

"With NBT we can hope that one day it will be more efficient, that's for sure," she said. "At the same time, these new technologies will remove a part of the dream."

In a few words, French decision makers are between two chairs, the great desire to find new varieties faster and a kind of duty to not do anything because of anxiety. And Marie-Christine Dufour has the best conclusion to all of this. "Anyway, all of this will have a future or not with political decisions," she said.

This important topic isn't in the field of wine growers, more on political decision makers. With the new European decision about the ability to experiment with NBT in-vitro, things may change a little bit. Or not.

## France

## THE MOST INTERESTING EXPERIMENTATIONS IN BORDEAUX AND CHAMPAGNE



# It's Time Again for PIWI WINES

Mainly recognized for some great hybridizers, France has been a driving force during the last years to experiment such varieties in the field. The new PIWI hybrid varieties could change a lot of things with the need to reduce environmental inputs and with the nontreating zone next to dwellings. It's only the beginning of a new process, with a lot of hope

By CHRISTOPHE ANDRIEU

are

some



It's not the first time in the history of wine growing that we are talking about hybrids. We all know the disasters caused by phylloxera in the middle of the 19th century. Graft hybrids were the solution to face that devastating pandemic and in the wake of these lifesaving programs, many French innovative hybridizers (Couderc,

Baco, Oberlin and Planchon naturally) have created a lot of new varieties, mostly resistant to this new invasive fungus but not very reputable in terms of organoleptic qualities. That's why "in 1927, France decided to prohibit hybrid varieties in the wine appellations," said Jacques **Gautier**, agronomic engineer for INAO (French national institute for quality and appellations). "Until now, only one exception, the white Baco creation, a variety used in a very famous AOC of spirit, the one from Armagnac."

At this point, it is also important to make a literary aside. In French language and conventions on talking about vine, the term "cépage" is only used when we are referring to natural varieties from vitis vinifera. and usually translated as variety in English. When talking about interspecific varieties (e.g. hybrids with vitis amurensis or vitis rupestris) the French use the specific term "variété," which is also translated as variety. That's probably why on the international scene, peo-

ple are mainly using the new acronym of PIWI (for Pilswiderstandfähig), a German one. But, in France, except for some wine growers, nobody is talking about PIWI and that's why, in this article, we will mention them as "hybrid varieties" only to be as clear as possible. Thanks to them, French viticulture has been saved in the past. Actually, we usually forget this part of the history, just thinking that the main production has been made for a long time with the famous varieties like  $\bullet \bullet$ 



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### FOCUSING **O N** PIWI

## WINE W@RLD MAGAZINE September 2023

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## France

Merlot, Cabernet Sauvignon, Pinot noir or Chardonnay. By the end of the 1950s, the hybrid varieties were representing somewhat 30% of French vines. And in the 1970s, a new generation of innovative hybridizers led by famous Mr. Bouquet and Mr. Doazan, had already anticipated some changes like the need of fewer intrants, and had created a lot of new hybrid varieties (32) with some resistant genes against the main diseases of the vine (down mildew or peronospora and oïdium) while they crossed mainly varieties from vitis vinifera with muscadinia rotundifolia.

And it worked well. Named as "Bouquet's varieties," these were described as quite interesting in terms of quality and were also resistant against one disease. But this monogenic ability wasn't enough for the next generation.

"In 2000, we decided that we needed new varieties with polygenic resistances," said Olivier Yobregat, agronomic engineer for IFV (French institute of vine and wine), based in Gaillac, south west of France. "That's why the new program started with INRA of Colmar (National Institute of Agronomic Research) with this goal, having polygenic resistant hybrid varieties."

Called Res-Dur1, this program opened a new era, combining the resistance with a better quality of wines, because, for a long time, there were still some uncertainties about it.

## **Future Adaptation**

"With hybrid varieties actually produced with sexual reproduction, that is no longer the case," said Loïc Le Cunff, the nd main engineer on this project at IFV. "Foxy tastes or deviancies which may emerge with first hybrids are finished. Since 2000, the new programs Inrae-Resdur 1, 2 and now 3 have obtained very good results in terms of quality."

## A view shared by Jacques Gautier from Inao.

"The selection programs led by research organisms with the new molecular techniques have allowed a lot of progress," Mr. Gautier said. "With many successive crosses between an individual with genes of resistances and a variety stemming from vitis vinifera. Finally, after 5 or 6 crossings, we have an individual with the desired resistance genes and the characteristics very close from vitis vinifera. Mainly, we can



planted." For the last twenty years, talking about PIWI in France has meant a very scientific program or a solution for wines without geographical indication or, why not, for Igt wines. But, by the end of 2021, everything changed. A new opportunity was offered by the European Commission even for the Aoc wines, and it was a revolution.

Between hope and misunderstanding, the gap is sometimes very wide. But, let it make clear. The Commission only allowed federal institutions to accept some experimentations in the vineyard for a ten-year maximum test. At the end, INAO commissioners will tell the appellations if the experiment worked or not. And what is sometimes not very well understood is that the possibility of having some hybrid varieties planted is a part of a larger plan which is called VIFA (could be translated as varieties with interest for a future adaptation), which is not only targeted on hybrids. Since 2018, INAO has offered the ability to adapt "new varieties in an appellation while

observing this for at least during ten years in the field of voluntary operators with specific well-defined conditions," Mr. Gautier added. "But, be careful, it's not an open bar." The winegrower cannot plant

more than 5% of his vineyard and cannot use more than 10% in the final assembly of his wine.

## **Choices from Bordeaux**

When we are talking about these new VIFA possibilities, it's not only about hybrid varieties but also varieties from elsewhere or even very old varieties. For example, Bordeaux Aoc has made the choice - not always understood - in 2018 to try six new varieties for its appellation, four blacks (Castets, Marselan, Arinornoa, Touriga nacional) and two whites (Alvarinho, Liliorila).

It's important to mention it because in the main VIFA program, INAO only accepts a total of 20 varieties to experiment for the next ten years, ten blacks, ten whites. And, if Bordeaux has already chosen six new vitis vinifera varieties to experiment with for the next ten years, this great appellation has also decided to take the step with four more hybrids, three whites (Floréal B, Sauvignac Rs and Souvignier gris) and one black (Vidoc N). Six plus four, it already makes ten,

technical follow-up," said Mr. Gautier. "And we have to keep in mind that for the next few years some new hybrid varieties will arrive." But it's a fact, the Bordeaux ap-

pellation has already used this ability to test in the field half of its opportunities. "With the six first varieties,

the goal was to complete our assembly wines panel," Marie-Christine Dufour, agronomic engineer for Bordeaux Aoc, explained. "Producing mainly blended wines is an advantage for us. The new varieties can be considered as a security. But they don't come from nowhere. It's more than eight years that we have in Bordeaux a specific parcel conducted by Inrae with 55 different varieties. Some of them were very interested to try in the field. That's why we decided to choose these six varieties. Now, with these new rules of experimentation, it's easier to make it. Before, you had to quit the Aoc to be able to test new varieties. And we are talking about 5% of the vineyard and 10% of the wine, it won't be a total revolution."

If the first Vifa varieties are al-

"We are at the beginning of the process," she added. "Now, we are more concentrated on the tools we will develop to support our winegrowers. We will give them some computational tools very easy to manage because we need a lot of

information about these experimentations. Of course, hybrid varieties can be considered as an easy solution for some complicated problems. These varieties will be perfect with the main problem of proximity of dwellings. But I'm not sure the hybrid varieties will be the only solution. It will be a good solution amongst some others." Everybody knows that 2018 was quite bad in terms of mildew. And 2023 will be even worse. "It's a reality," Ms. Dufour said. "This year where there were

resistant vines, the mildew wasn't a problem like it was elsewhere. That's why I think it's an interesting solution, but not the only one."

Of course, when we are thinking of Bordeaux, we immediately have some assembly characteristics in mind. What will these wines become with (few) parts of PIWI in it?

"We already made some real-life tests," she said. "The Vidoc N looks somewhat structured, better than Artaban, to name one, and the Floreal has a lot of Sauvignon's qualities. So, let's see. Actually, we have only made micro-vinification wines. It's not the same when we are

doing it on a larger scale."

deniable advantages with its own resistance to oïdium and mildiou. It also may have very interesting agronomic characteristics with climate changing. Its late budding has great quality and its maturity is also later than the Chardonnay."

As the INAO allows more than one hybrid variety, it may be surprising to see Voltis B as a unique solution.

"We are involved in many programs," Ms. Vilmart said. "It takes time and this variety seems to be a good one for our typicality."

By the end of next year, five hectares will be planted with the new variety. Approximately 40 winegrowers are already involved and most of them are located in Znt (specific areas around dwellings with fewer treatments).

"The project has been received positively because the Znt topic is a real problem," she added. "Of course, everybody is waiting for the future new blend made with it (maximum 10%). Nobody will make a lot of publicity about it but some micro-vinifications have already been done with some tiny experimental grapes."

Some happy few have already tasted these experimental wines and the result seems to be very encouraging. Now, we have to wait for the second or third next harvest at least and then the long process of champagnisation, so probably not a single bottle before 2027 with some part of Voltis B in it.

## **New Perspectives**

The problem of Znt will of course be a great leverage to the decision to plant hybrid varieties. "Probably, the next hybrid varieties plants will be done preferably in these particular areas, in the most urbanized lots." said Mr. Gautier. "We have defined a 20-meter zone around these dwellings where the criteria of 5% maximum is removed because, like in Champagne, some vines are totally located in this urbanized area. But we don't remove the 10% maximum of the variety in the commercialized wine. For 800,000 hectares of vines in France, the number of vines in proximity with dwellings may be a large one. For a region like Champagne, it may represent a great part of the 33,000 planted." Some numbers could lead to 2,000 hectares in a Znt situation in the only region of Champagne. Imagine how many kilos of grapes it makes, and how much money, too. We understand better why planting hybrid varieties could be a good option in this case. The Znt problem is a logical consequence of the look everybody



half of the possibilities offered by the INAO.

"Ten varieties per color is the rule but we invite the appellations to test less than ten because we want to ensure a good

ready planted and also vinified, it's still not the case for the new resistant varieties (Floreal, Sauvignac, Souvignier gris and Vidoc).



Champagne, Too

As previously seen, Bordeaux has made a ten varieties choice with the new VIFA experimentation. We heard a little bit about it, but there was no revolution. In Champagne, decision makers choose to add the Voltis B as an experimental hybrid variety and it generated a lot of discussions, quite logical for such a big appellation, mainly made with three varieties (Pinot noir, Meunier and Chardonnay). "It was granted last year," said Mr. Gautier from INAO. "We will see the results in the next ten years. Actually we have very few certainties, but we know that wines produced with Voltis B have some characteristics and it's not a random choice made by Champagne.

Keridwenn Vilmart, from the SGV (winegrowers syndicate of Champagne) added that they "studied the Voltis B for some years."

"That's why we decided to add it in our Aoc specifications," she said. "This variety has un-



has on the environment and viticulture of course. Less and less treatments are required by consumers but by people who are living close by too.

"It's a very high demand from the society," said Mr. Le Cunff from IFV. "Everybody wants to get rid of plant protection products. We really need to treat the vines less. All of this has triggered a new dynamic with new varieties and probably interesting varieties which will appear every two or three years."

But it's not only a matter of environment, even if this part is quite significant in the decision. The organoleptic side is important as well.

"Now, everybody could have tasted some wines made with the last generation of hybrid varieties," he explained. "And it has completely changed the vision we had about hybrids." Naturally this year, marked by the mildew disease, winegrowers are eager to know much more about the resistant vines. "Make no mistake, with these varieties we will still need to treat the vines," Mr. Le Cunff said. "But we will reduce them by 80% or sometimes by 90%." A wonderful result indeed.

"We also recommend making a post-harvest treatment," he said. "Of course, it may look unusual but it can be very interesting in terms of durability and resistance."

We also have questions about the possibility of overcoming resistance. Usually, nature is making its own way, so why not the diseases also?

"There is a certain lack of efficiency of natural resistance," he

varieties from Inrae-ResDur program have total genetic constructions against oïdium. For the mildew, the resistance is very high but not total. For the other resistant varieties not registered in our catalog, we have seen some variabilities, some are more sensible to oïdium, some other to mildew. That's why we need to remain cautious. In France we are lucky to have a rather original device which is called Oscar."

said. "By the way, the resistant

This observatory collects a lot of information from 140 parcels where hybrid varieties are planted. Until now, results have been very encouraging. "Behind the idea of resistance overcoming, there's also the idea of epidemic," he said. "Until now, we haven't seen such a phenomenon. But, be careful. It doesn't mean it won't arrive. Of course, in a 2023 year with a high pressure of mildew, we can notice that resistant varieties have resisted, for sure."

## Some Resistance

Talking about mildew and oïdium is one point but we don't listen very often about the ability to resist to black rot, another embarrassing disease. "Effectively, it has been the bad surprise of the Inrae-ResDur1 program," Mr. Le Cunff agreed. "Resistant genes to black-rot are existing but we are more on partial resistance, we may even talk about tolerance."

But the future isn't so pessimistic as natural resistance does exist.



## From Ancient to New Generations By talking about hybrid vari-

"Some varieties, like Vidal 256 eties, we have also to mention or Vidal blanc are presenting a high level of resistance against black-rot and Ifv is already working on it to create new kinds of varieties," he said. And there's still one enemy very active in France, the socalled "flavescence dorée". "Another team from Bordeaux is working on it," Mr. Le Cunff

said. "But, in this topic, characterizing the plants is a very heavy experiment." And, there's always a new hope,

coming not very far from Bordeaux.

"In a so-called forgotten variety, the 'Madeleine noire from Charentes,' we may have found a natural resistance to the flavescence dorée," he said.

Naturally, this variety will be studied and integrated into the national program. What is more important with this madeleine is that it is genetically identified as the mother of Merlot.

## that six varieties won't be authorized to be experimented in Aoc areas. We can name these six banished varieties: Clinton, Noah, Jacques, Isabelle, Herbemont and Othello. Even if some of them have very poetic names, their products are definitively judged as bad ones, even if some winemakers are still using them and producing wines simply noticed from France. As we are at the beginning of a new process, the ac-

tual statistics show that old hybrid generations are still the most planted. With 900 ha, Villard N is still the number one. Baco B is following with 800 ha (but used for distillation in Armagnac AOC), the Plantet with 557 ha and Chambourcin with 464 ha. But things are changing with the next ones. With 345 ha planted, Ssouvignier G is the fifth and Floreal the sixth (207 ha). Both of them are in

constant increase and it's very

logical as they meet both requirements: great resistances and organoleptic qualities.

"On the aromatic side, Floreal B is miles ahead of the other white varieties," said Olivier Yobregat, from IFV. "Souvignier Gris has a great acidity and has some other qualities like being less sensitive to botrytis and even to black rot. Voltis is also very interesting, highly productive with a good acidity. I was not surprised when Champagne chose this one. It's a variety which is very close to the other varieties used in this appellation."

And, if there are some varieties created or enhanced during the last twenty years, some others will appear in the next few years. The Gaillac based agronomic engineer is working on some of these programs, specifically the one led by Côtes de Gascogne Igt. "We are upstream, we are cross-

ing classical varieties with resistant parents and we hope we will have the characteristics of both," Mr. Yobregat said.

It's a long way but the techniques are really proven.

"We already have some varieties interesting in organoleptic terms," he explained "I'm sure we will have even better ones in the next few years."

And in this characteristic year of mildew, Mr. Yobregat also noticed that many winegrowers want to try hybrids now.

"This year, it was really easy to compare," he said. "Even in the nurseries the difference was huge between resistant and classical varieties. When you have to treat 80% or 90% less and mildew isn't there, it's very hard to understand how interesting it is to have such varieties in the vine. Naturally, a lot of winegrowers want them now. But we cannot change a complete vineyard in two or three springs, we will need to be more patient.".

A remark supplemented by Jacques Gautier from INAO.

"Certainly, demands will arrive from approximately everywhere," he said. "After demands from Bordeaux, Champagne, Côtes du Rhône and Provence, we just received new demands from Alsace and Touraine."

But we have also to consider this with a practical point of view. "It will take time," he said. "Firstly, definitive decisions will be taken after the ten years of observation minimum. And we have to be sure that the plant material must be there.To implant them on a great scale, we will have to produce these new varieties in quantity." This is not enough. So, in a way, hybrid varieties are back, but the road will be long.





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## FOCUSING ON PIWI



THE TERM PIWI STEMS FROM THE GERMAN WORD PILZWIDERSTANDFÄHIG (RESISTANT TO FUNGI)

## In the HOMELAND OF PIWIS, Uncertainty Still Looms While SOME PROJECTS MOVE FORWARD

On one side there is the committed effort of big names like Rotkäppchen-Mumm, important cooperatives like Deutches Weintor, and smaller-scale experiences like Zukunftsweine, and on the other side the market challenges and some producers' attempts that have already been abandoned because of the little demand. Questions on the name and its communication also still loom over PIWI wines

## By KATJA APELT

he conditions for viticulture have become more difficult in many places due to the increasingly noticeable climate change. At the same time, new, robust grape varieties, the so-called PIWIs, are currently gaining in importance. In Germany, three percent of the vineyard area is already planted with these different varieties. PIWIs are no longer only to be found among those with a strong conviction. Even large producers, such as Rotkäppchen-Mumm, are increasingly working with the resistant varieties.

With its 100 hectares in Rheinhessen, Germany, and 100 hectares in the French département of Gers, west of Toulouse - the largest sparkling wine producer on the German market, Rotkäppchen-Mumm Sektkellereien GmbH, has secured itself a quite an area of PIWI plantings, to experiment with the new varieties in the future. The current developments on the subject of robust grape varieties are exciting. Planting began in Rheinhessen this year, and will start in Gers next year. The first wines are expected in 2025. This is a novelty for the sparkling giant, as until now, the company, which is based in Freyburg and Eltville, did not have its own vineyards but bought all the base wines for its sparkling wines. This year, PIWIs were also included for the first time in the central wine purchase tasting for the sparkling wine base wines. The cuvée of the white wine brand Blanchet from the house of Rotkäppchen ranked sixth among German- branded wines with a turnover of 38 million euros, according to market researcher Circana, and it already contains five to ten percent of PIWIs. "I firmly believe in PIWIs, especially as a base wine for sparkling wines," said Christof Queisser, CEO of Rotkäppchen-Mumm, who added that establishing the new grape varieties on their own would be a "huge step." "But as a component of a cuvée for a strong sparkling wine brand, where you don't have to build up the reputation of the grape variety first, that is of course a completely different issue," he said. The advantages of the new, robust grape varieties- as the word says, "fungus resistant" -- are obvious. It means that the new grape varieties have so-called resistance genes - the latest developments have two or three of them - which offer the vines protection against oidium, peronospora and grey rot, for example. For the winegrowers, this means a massive relief in plant protection. Against the backdrop of the European Green Deal, which among other things envisages a 50 percent reduction in pesticide use by 2030, the new varieties are a key to the solution. In addition, less frequent drives through the vineyards reduce CO2 emissions. For organic winegrowers, whose options for controlling diseases in the vineyard are limited anyway, the use of PIWIs can save yields in wet years. A spokesperson for the German Federal Ministry of Food and Agriculture said that increased cultiva-



Christof Queisser

tion of fungus-resistant grape varieties is essential if Germany is to achieve its goal of halving the use of synthetic chemical pesticides in viticulture by 2030. Germany is a leader in this field thanks to its successful vine breeding by the federal and state governments. Three percent of the vineyard area in Germany is now planted with the new grape varieties. Many of the varieties are the result of research in Germany and neighbouring countries. The importance of the topic in Germany is also shown by the fact that Federal Minister, Cem Özdemir, visited the Zukunftsweine (Future Wines) initiative this summer in person.

## The Wines of the Future and the New Normal

Zukunftsweine, founded only last year by the two organic winegrowers, Eva Vollmer and Hannecke Schönhals, and a lively team of PR and marketing professionals, has set itself the goal of making PIWI wines the new "normal." There is no reason why everyday wines should not be made from the more sustainable grape varieties in the future, said Felix Hoffmann, co-founder and spokesperson for the initiative. Today, the network comprises 56 members from Germany, Austria, Luxembourg and Switzerland and distributes its private label to Germany's second-largest organic market chain Alnatura with 143 locations, to the gastro supplier FrischeParadies, which is represented throughout Germany, as well as to various online and stationary wine retailers, restaurateurs and event organisers. The highlight of the strategy: The PIWIs, in this case called Zukunftsweine, get a platform and visibility. Finally, the members can equip their bottle with a label in the Zukunftsweine CI - a way to make PIWIs a brand, because the new, innovative grape varieties still lack the necessary awareness. Especially in a strongly varietal-oriented market like Germany, newcomers have a hard time on the wine shelf. The varieties are called for example Cabernet Blanc, Sauvignac, Caladis Blanc and Souvignier Gris for white wines and Satin Noir, Pinotin and Regent for red wines. "It takes an enormous amount of time for a grape variety to be accepted by consumers in the supermarket and for them to say 'Hey, I'll take this one'," said brand wine expert **Christof Queisser**. Somebody has already started. Since this summer, Deutsches Weintor, one of the largest cooperatives in the Palatinate with 750 hectares of vineyards, has been selling its supernatural line with a white wine and a rosé in well-stocked German food retailers. "We want to make the innovative PIWI wines known to our customers," Frank Jentzer, managing director of Deutsches Weintor, said. "Here, cuvées offer the best opportunities to balance the wines. In addition, the focus is clearly on sustainability and not so much on a specific grape variety."



Frank Jentzer

Cornelia Schlepper

## Markets Movements

Nevertheless, the Rewe Group, for example, Germany's second-largest food retailer, has joined forces with the internationally renowned Reh-Kendermann winery (e.g. Black Tower) to put a varietal PIWI on the shelf.

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## FOCUSING ON PIWI





From left: Felix Hoffmann, Hanneke Schönhals, Christoph Hosseus-Schönhals, Eva Vollmer, Johannes Schiebe, Petra Peres from the Zukunftsweine project

"We were the first wine company to realise an exclusive, national listing for Cabernet Blanc in cooperation with Rewe," said **Cornelia Schlepper**, key account manager at Reh-Kendermann. "Our future forecast for PIWIs is definitely positive and we see them gaining importance in the coming years."

To make the topic of PIWIs even more attractive, however, some steps would have to be taken.

"The topic of PIWIs can seem quite complex at first glance and might scare off potential end customers at first," Ms.Schlepper said. It is therefore necessary to make the different PIWI varieties more present, she said, so that customers are more aware of them and can more easily familiarise themselves with the names. Ms. Schlepper advocates not highlighting PIWIs as something special or exotic, but marketing them like any other grape variety. "This way, no questions are raised in the consumer's mind, but rather curiosity arises to discover a new variety," she said. Yet enthusiasm about PIWIs is not great everywhere.

"The first pilot trials in the past two years were not very successful," said **Christoph Schneider**, head at one of Germany's largest wine cellars, Peter Mertes. Therefore, the company is not planning a project with fungus-resistant grape varieties this autumn. "The demand from customers is simply still too low," he explained. "The level of awareness is little – not only on the consumer side. On the producer side, too, many have only recently started to look at the new grape varieties."

The advantages of the new grape varieties need to be highlighted more clearly and communicated to the consumer. German e-commerce industry leader Hawesko is also cautious on the subject and has no PIWIs listed. At the moment, there is still too much educational work to be done.

## Issues- From the Research to the Name and its Communication

In fact, the topic has only been gaining momentum in Germany for about four years. Although PIWI breeding began as early as 1910, almost at the same time as the first experiments made in France. The currently popular grape varieties, however, are the results of research over the past 15 years. In the meantime, it was almost impossible to obtain grapevine material. The waiting lists were long - also because there was a high demand especially from France, but also from northern Europe, for example from Belgium, the Netherlands, Luxembourg, Great Britain, Sweden and Denmark. At present, the cuttings grafted in Germany account for about 20 percent of the total production, said vine breeder Volker Freytag. About half of this is sold abroad. The bottleneck also arose because the propagation areas for the new varieties had to be established first. So while some have taken the reins of action others are still waiting. The name debate is certainly not helpful either. Many market participants consider the term PIWI and its formulation of fungus-resistant grape varieties difficult to communicate. "It is likely that only very few consumers are really interested in the fungal resistance of the varieties," said Ms. Schlepper of Reh-Kendermann. "Therefore, the focus should be on the taste characteristics and the enjoyment aspects in order to arouse the customers' interest." Alternatively, names like robust grape varieties and resistant grape varieties are being used - but the search for the most catchy term is still on. The German Wine Institute has also taken up the topic. Next year's ProWein fair will be dedicated to new varieties, presumably under the heading: Future Varieties.



## ONLY 20 PRODUCERS AND 150 HECTARES, BUT WITH STRONGLY INNOVATIVE FEATURES

## Wine Production in Sweden? YES, THAT'S RIGHT

Climate change is leaving room also for traditional vine varieties, but there is a big investment in PIWI wines. Despite some market challenges, the trend is already producing results and could change everything we know about northern countries, including the monopoly system

By **ÅSA JOHANSSON** 

e wanted to start a winery up north to avoid problems with climate change, but honestly, we did not think it would be as far north as in Sweden," said **Andrea Guerra**. Mr. Guerra is an Italian winemaker from Salerno. Together with his Swedish girlfriend, Emma Serner, in 2018, he started the winery Långmyre at the Island of Gotland.

"The Island of Gotland outside Sweden's eastern coast has the most sun hours in the country, a constant wind from the sea and the soil has a high level of chalk, not different from the soil in Chablis or Champagne," he explained. Andrea and Emma planted 26,000 vines on five hectares, approximately 12.3 acres.

"In a couple of years, we will be able to make around 20 000 bottles," he said. The varieties are so-called PIWI varieties, produced by the nursery Vivai Rauscedo in the north of Italy. For example, fleurtai, a crossing of friulano and sauvignon kretos originating from sauvignon blanc.

Swedish wine production started in 1999, and today there are around 150 hectares in total and 20 serious producers - not seeing wine produc-



Thora wine cellar



**Christoph Schneider** 



K Felix G Åhrberg



Emma Berto

tion only as a hobby. Almost all vineyards are in southern Sweden and on the Islands of Öland and Gotland. Most wineries use PIWI-varieties: crossings with traditional grapes (vitis vinifera) and wild vines, making them both resistant to many diseases and adapted to the Nordic climate. But why use hybrids if the climate is changing? Why not use vitis vinifera like they have done in England using pinot noir and chardonnay?

"Why not?" Mr. Guerra rhetorically replied. "We live at the winery, and the hybrid varieties require no chemical treatment, and therefore the agriculture is naturally environmentally friendly and sustainable - all without compromising the quality."

**K Felix G Åhrberg**, enologist, viticulturist and pomologist educated in Austria, from the winery Kullabergs, agreed.

"Why use a Fiat when you can have a Ferrari", he said while showing the new 2,000 square meters big winery. He grows many different hybrids, also the most common hybrid in Sweden, called solaris, a hybrid of merzling and geisenheim 6493 produced in Württemberg in 1975. Kullabergs has 14 hectares (30,8 acres) with vineyards in the western Scania, the most southern region in Sweden.

Another winery in Scania is called Thora, where they have chosen not to work with PIWI-varieties. Two young French winemakers take care of the facility, **Emma Berto** and **Romain Chichery**. They are not sure that the PIWI varieties are the





Lars Trogen - Courtesy of the wineries

Marie von Segebaden

future for Sweden. In fact, at the winery, they have traditional pinot noir.

"Hybrids give good grapes, but it is hard to control the maturation," Ms. Berto said. "Most PI-WIs have big leaves, which result in intense photosynthesis and accumulate a lot of sugar. It is hard to find a balance."

"Maybe in five-ten years, the PIWI varieties will be sensitive to new diseases or mildews, and then they will make no sense," Mr. Chichery echoed. "I would not take the easiest way."

They have noticed that the vines with pinot noir are doing well. For the moment, there is no common wine style among the producers, but efforts are being made by the Swedish Sparkling Wine Association in this direction to find a consensus of style and approach to wine production (traditional method winemaking, mainly using the solaris variety).

"It would likely be more helpful in presenting a "Swedish Wine Style" to consumers," said wine consultant Lars Trogen. "But with only five producers currently active as members it will still have some way to go."

## The Route to Market and Challenges for PIWI Wines

The route to market for Swedish wine is another challenge. Direct sale from the wineries

is forbidden by law and controlled by the State Monopoly. At Systembolaget, sales of Swedish wine increased by 225 percent between 2015 and 2019. The definition applies to wine made from grapes grown in Sweden. Around 120 Swedish wines, most of them made with PIWI-varieties, are listed on Systembolaget's website.

"I do believe that what would really raise awareness of Swedish wines and PIWI-varieties is if the ban on direct sales to consumers of alcohol was lifted," said Mr. Trogen. "Which, together with the rising trend of consuming locally produced products, could be part of boosting agricultural tourism in the country."

Marie von Segebaden is the buyer at Systembolaget for German wine.

"We are planning to launch PIWI-wines from countries other than Sweden", she said.

For the moment, the Monopoly is looking for the possibility to launch 24,000 liters with PI-WI-wines from Germany during 2024.

"The quality of the wines made with hybrids varies," she said. "There are both good and bad examples. Price range is not yet set. What is lacking is bigger volumes and it will be fundamental and a challenge to communicate that these wines, in some ways, can be more environmentally friendly than organic wine. As it is marketing, this must be made by the producer and importer and not by us. The state Monopoly is open for new alternatives."

"I think the success of PIWI-wines from other countries depends a lot on the price level the wines land at on the shelf," said Lars Trogen. "Another thing that I think stands in the way of the success of Swedish wines is the relatively high price level, so if other PIWI wines are launched with a lower price picture, it might change the Swedish supply. For better as well as for worse, of course - I like that some of the Swedish producers stretch the quality bow hard!"

When thinking of Sweden in the future, we might need to add Swedish wine to the list with Abba, Ikea, and Volvo.



Andrea Guerra and Emma Serner from Långmyr





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## **WINEMAKING PROSPECTS - GOING BEYOND HYBRIDS WITH PIWI WINES**

# Plenty of Options for Canadian Wine Makers

By GABRIEL RIEL-SALVATORE

ith nearly 600 wineries

spread over 12,500 hectares, the Canadian wine industry has grown considerably over the last four decades. Production is concentrated in the country's warmer regions such as Ontario's Niagara Peninsula, British Columbia's Okanagan Valley, Quebec's Montérégie and Nova Sco-

biggest grape producer, accounting for around 60 % of the total production, followed by British Columbia (33%). There are risks involved in growing vines in the country of icewine; harsh winters (reaching -25°C in some places) and high humidity levels are accepted outcomes for Canadian winegrowers. In such extreme conditions, the use of hybrid or PIWI grape varieties are a handy solution over conventional grape varieties, limiting losses and providing ecological advantages. For most producers, however, vinifera means premium, and high-yielding hybrids fill in the lower price tiers of the portfolio. While the use of vinifera varieties still dominates the industry in the main Canadian wine regions, smaller, colder wine-growing areas such as Quebec are adopting them more, promoting their unique character as regional pride.

## **Embracing Hybrid Wines** Mainly associated with places

too cold for vinifera vines, hvbrids have long been a genuine

Canada holds a long history of wine production based on hybrid grapes mainly in the provinces of Ontario and Québec. Yet for most producers, especially in British Columbia, "vitis vinifera" still means premium. Consumer trends are changing and local wines are becoming more popular. Despite the hurdles, opportunities in the vineyard are opening the door to gan Valley, Quebec's Montérégie and Nova Sco-tia's Annapolis Valley. Ontario is by far Canada's innovation more than anywhere else



Simon Naud and Véronique Lemieux

## Drinking Local and **Changing Consumer Trends**

The wine community in Quebec is passionate about offering alternatives to wine lovers; the trend of drinking local wines is steadily picking up steam. More broadly, two diverging views are emerging around hybrids' future in Canada and around the world. The artisanal wine scene working with new cold hardy varieties, particularly in North America, wants consumers to open up in terms of quality, texture and taste profile. Other actors of the industry working with PIWI, largely European, are hoping for a more organic and sustainable viticulture that would challenge consumers as little as possible.

It is likely that as more wine drinkers discover quality hybrid wines soon in their drinking experience, this might lead a category of wine drinkers to more easily accept certain aspects of the hybrid flavour profiles. Coincidentally, some so-called hybrid characteristics such as "foxiness" tend to dissipate as growers and winemakers learn to work with the grapes and handle them more effectively, in both the vineyard and winery.

About 165 producers were licensed to produce artisanal wine in the province of Quebec in 2022 and they generated a total production of 3.1 million bottles from 1,000 hectares of vines. Hybrids account for about 5% of the world's vineyards, but in Quebec non-vinifera varieties cover 80% of the vineyard map. Over the past 40 years, the number of local vineyards has grown steadily and a handful of factors have contributed to bringing hybrids forward in the province in a new manner-some predictable, some less so. "Snobbery has diminished over the years due to a better understanding of grape varieties by winemakers," said Simon Naud, owner of Vignoble de la Bauge. "We've improved our winemaking a lot and started mastering some techniques such as the use of carbonic maceration in whole bunches to reduce acidity and bring out fruitiness." "The new generation of Quebec consumers are curious, keen to try new products," said Véronique Lemieux, winegrower and research coordinator for Cépages Résistants Nordiques. The craze for local products partly explains this openness, but according to Ms. Lemieux: "There is a real openness to the different tastes of hybrid grape varieties." With adapted varieties and longer growing seasons allowing good levels of ripeness, she believes Quebec is now more than ever able to make quality wines based on cold-hardy hybrids. On their quest for more sustainable vineyards, the warmer regions from the rest of Canada, on the other hand, would probably benefit from the use of PIWI varieties in the years to come. As their flavour profiles have, in some cases, made them practically indistinguishable to those of vinifera, why not give it a try?

solution for wine production in this part of the world. International breeders had long explored their potential for disease resistance, but cold hardiness grew more in demand in the second half of the 20th century.

In parallel to Europe—which produces PIWI (Pilzwiderstandsfähige) fungus resistant varieties such as Regent or Solaris, developed by German breeders at the Julius Kuhn Institute and Freiburg University in the 1960s and 1970s— North America became a hotbed for cold-climate grape breeding.

Research centres such as the University of Minnesota developed cold hardy varietals such as Frontenac Noir, released in 1996. In just a few years, these hybrids have become Quebec's most planted grape varieties. The Marquette varietal, introduced ten years later as the great red hope for North America's cold climate, is currently the fourth-most cultivated grape in Quebec.

The Vineland Research and Innovation Centre in Niagara, Ontario, is a uniquely Canadian initiative which also bred its own line of champions such as the L'Acadie Blanc. Created in 1953, it has the blood of eight different Vitis species in its veins. Now widely cultivated in Nova Scotia, with some plantations in Quebec and Ontario, it offers good still and sparkling white wines. These centers all share the same objective of increasing the quality, productivity and marketability of these new fungus-resistant and cold-hardy grape varieties.

According to Darcy O'Neil from PIWI Canada,

there are at least 14 varieties available to Canadian vineyards. Artaban and Voltis from France, Merlot Kanthus and Sauvignon Kretos from Italy and Felicia and Solaris from Germany are just a few examples. Yet, the use of PIWI grapes still remains limited compared to more traditional hybrids and mainly involves older French genotypes from the 1920s, such as the Seyval Blanc. Similar to hybrids, the benefits of planting PIWI grapes in Canada are numerous. They are more sustainable while being more economical thanks to reduced vineyard inputs such as fuel, fungicides, labor and tractor wear. Their wines are closer to those of vinifera and, in some cases, indistinguishable. Many of the modern PIWI produce vines are 80% to 90% vinifera. The German government does not distinguish them taxonomically as they contain only a tiny percentage of non-vinifera species.

Notwithstanding their bad reputation, a few hybrid varieties have managed on occasion to generate a proper consideration alongside traditional vinifera grapes. Vidal Blanc, the greatest commercial success involving a cold-resistant grape variety in Canada, has taken a spot alongside Riesling as a favoured grape for icewine production in Niagara. In 1991, Inniskillin's Vidal Icewine won the Grand Prix d'Honneur at Bordeaux's Vinexpo, putting Canadian icewine on the international wine map.

Vitis vinifera grapes still dominate Ontario/ Niagara-based vineyards, with a focus on cultivating Chardonnay, Riesling, Pinot Noir and Cabernet Franc. Vidal, a cross between Ugni Blanc and Rayon d'Or (Seibel 4986) developed by the French grape breeder Jean-Louis Vidal, is however the highest-yielding variety in the province. Hybrid grapes account for 38 % of grape production there, with Baco Noir (3,750 tons) being a popular red variety alongside older European hybrids such as Seyval Blanc and Chambourcin (1,500 tons).

In British Columbia, like in most parts of the world, hybrid varieties have largely been relegated to second-tier status. Famous for its Bordeaux blend wines, 97.5% of the region's 4,486 hectares (53.1% red and 46.9% white) are planted with vinifera grapes. The top 10 in order of hectares are: Merlot, Pinot Noir, Pinot Gris, Chardonnay, Cabernet Sauvignon, Cabernet Franc, Gewürztraminer, Riesling, Syrah and Sauvignon Blanc.

Hybrid grapes are well known and increasingly accepted in Quebec. A large proportion of the Belle Province's wineries are planting University of Minnesota hybrids such as Marquette and Frontenac. PIWI grapes have yet to make a major breakthrough. Despite their growing success, many wine lovers find the characteristics of hybrid varieties pose aesthetic problems. Non-vinifera varieties often struggle to develop adequate tannins, and high acidity is also common. They also create distinct hybrid notes, which can affect the acceptance of wines produced with these grapes and limit exports to other countries with appellation systems.



## AN INTERESTING POTENTIAL MARKET The First Driver in JAPAN IS TASTE

he introduction of PIWI wines to Japan has only just begun. PIWI wines are imported mainly from Germany, Austria and Italy, though the number of items is limited. Especially, Zero Infinito of Pojer & Sandri (Italy) - made with the Solaris variety- is very popular, and the importer allocates the number of bottles according to the request of shops and restaurants. On the other hand, one of the major wineries in Japan named Hokkaido Wine, which is located in Hokkaido, in the very northern part of Japan, started the cultivation of PIWI wines at the beginning of the 2000s. It seems that how PIWI wines are accepted in the Japanese market varies depending on whether they are imported or domestically made; however, both have potential for the future.

## Imported Wines. Never Mind Whether Wines are PIWI or not

PIWI wines are recognized in the category of natural wines. Interviews with importers who handle natural wines suggest that the market is not particularly concerned about the PIWI varieties. Taste, rather than a variety, is more important to drive sales.

"I was not looking for PIWI wines," said Futoshi Yuhara, who imports PIWI wines from Thomas Niedermayr (Italy). "I happened to have a chance to visit this winery, and the wines themselves were so delicious that I decided to import them." Mr. Yuhara started "Budousakagura (wine cave) Yuhara" in 2002. At first, he sold wines online, then he started to import wines, and now he wholesales wines to over 200 restaurants, mainly in Tokyo. Mostly, he handles natural wines with a focus on the high-quality ones from Italy and France. "We do not import wines just because they are PIWI, nor have a special promotion just because of PIWI," Mr. Yuhara continued. "I don't remember anyone who goes out of one's way to want PIWI wines. The producer, Thomas Niedermayr, also asked me what the reaction to PIWI wines in Japan was. Surprisingly, there are no problems with sales. We import about 1,200 bottles per year from this producer, and we do not see any problems selling them."

A few consumers wonder whether vine varieties are PIWI or not. There is not a specific focus and this helps the expansion of productions from resistant vines, usually framed as "natural" wines. And such productions are made in Japan, too

By MARI YASUDA



Futoshi Yuhara





Shelves in the Wine & Liquor Fujiya

しぼりた

as Hokkaido Wine pointed out. "If the PIWI varieties themselves become more well-known, I think PIWI wines will definitely be accepted in Japan," said Mr. Imamura of Hokkaido Wine. "The disease resistance of PIWI varieties is also a big advantage in Japan in order to achieve zero carbon; therefore, in the future, PIWI varieties will become popular among Japanese producers as well."

Regarding how to appeal to the market, he continued, "If it is emphasized too much that PIWI varieties are resistant to diseases, can reduce the number of pesticide spraying, and are environmentally friendly, then there is a risk that the market recognizes that PIWI's selling points are not its taste but its environmental friendliness. At our company, we have accumulated sufficient research and experience regarding the cultivation and making of PIWI wines before its introduction to the market; therefore, we are appealing that our PIWI wines are delicious plus environmentally friendly, and we have received positive reviews." A shop, which handles imported wines and which is not focused on natural wines, emphasizes that an additional appeal point is required. Takahiko Mitake, CEO of a wine shop named Wine & Liquor Fujiya, which celebrates its 60th anniversary this year and mainly handles fine wines from France and Italy, happened to learn about Zero Infini*to* through its importer.

"It's a variety I'd never heard of, and I thought it would be interesting because it's natural, with no addition of SO2, slightly bubbled and cloudy, so I decided to handle it."

Many of his customers are Burgundy enthusiasts, he said, but the people who buy Zero Infinito are different from them, they have a more open mind. For example, they like Burgundy, but also like Italian and other wines, and normally buy wines in a relatively reasonable price range.

"Not limited to PIWI, there are few who buy wines only because they are curious about the grape varieties which they have never heard of," Mr. Mitake continued. "If there is no additional value in addition to the rare grape varieties, it will be difficult to sell. For example, a wine wins a gold medal in a blind contest. In the case of Zero Infinito, besides the curiosity about a variety called Solaris, the wine is cloudy and slightly effervescent. Furthermore, it has fine lees and the taste may change when it is stirred. For example, if you drink half a bottle one day, stir it, and drink the remaining half on the next day, the taste will change. I think these reasons are why it became so popular."

According to Mr. Yuhara, the reason for good sales is the wine's taste.

"The wines of Thomas Niedermayr are not reductive, nor have any off-flavors," he said. "The wines do not show any Brettanomyces, nor volatile acids. They are beautifully made natural wines, while showing a cool sensation and freshness derived from northern areas. Most white natural wines are macerated.Niedermayr's white wines are not macerated, but they have umami and characvariety. Our mission is to communicate it to the market. Our customers select our wines not by varieties or terroirs, but because they taste delicious and are pleasant to drink."

ter. The wines are so delicious

that restaurants seem not to have any trouble selling them.

Even restaurants that are not

committed to natural wines handle Niedermayr's PIWI

wines because of their taste

Norinaka Oyama's view also

confirms that they do not mind

whether wines are PIWI or not. Mr. Oyama, CEO of Keppagle,

mainly imports natural wines

and other food items. He im-

ports PIWI wines from Josef

Totter (Austria). He decided to

import Josef Totter's wines not only because of their taste but

also because of Joseph's trust-

worthy personality who values

"We do not see any difference

for PIWI wines from oth-

er wines," he explained. "We

handle every wine in the same

manner regardless of PIWI

or not. A producer falls in love

with a grape variety, plants it

and decides to live with that

his family very much.

and quality."

## Domestic Wines. PIWI Varieties are Little Known

The most northern part of Japan, Hokkaido, ranks third in the production of Japanese wines which are made exclusively from grapes grown in Japan. Hokkaido Wine, which has been operating in Hokkaido since 1974, mainly grows varieties such as Kerner and Zweigelt, but in the 2000s, they also introduced PIWI varieties. Currently, they annually produce the equivalent to around 120,000 to 130,000 bottles of PIWI wines, such as red and rosé from Regent and a red from Rondo. They also produce a blended wine of PIWI grapes and other grapes such as Zweigelt. The problem relating to the sales of PIWI wine is that it is still unknown. "The history of wine con-

sumption in Japan is relatively



Norinaka Oyama

short," said **Naoaki Imamura**, a member of the sales planning department of Hokkaido wine. "As a result, it seems that the majority of consumers tend to choose well-known varieties when choosing wines. The PIWI variety has a very short history here in Japan. Furthermore, the variety itself is not well-known in Japan and there is little information about it, so customers may find it difficult to imagine the taste and sometimes they may avoid it."

## A Future Potential of PIWI Wines in the Japanese Market

Will the PIWI wine market expand in Japan in the future? As reported in the above, some consumers do not mind whether the wines are PIWI or not, while others feel a little resistant. For this reason, the approach for PIWI wines to the market may need to be flexible. "If producers increase the pro-



duction of PIWI wines, I think the market will expand in Japan accordingly," Mr. Yuhara, an importer of natural wines, explained. "The people who feel a little resistance to PIWI might be those who like old, classic wines. Young people don't care about PIWI or not PIWI. Rather, they may feel in sync with the producers who take further measures for the environmental issues."

On the other hand, for the consumers who do not primarily drink natural wines, the problem of low popularity of PIWI varieties will have to be solved,

"I heard that *Zero Infinito* was very popular," said Mr. Mitake.

Finally, the most important thing is that wines are delicious, as all the interviewees mentioned. Consumers do not buy wines because they are PIWI, but because they taste nice. If the quality is not good, the market of PIWI wines may not be able to expand no matter how good it is for the environment.





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HOW THE U.S. WINE MARKET IS EVOLVING



## BIG CHANGES FOR IMPORTERS AND DISTRIBUTORS. The Power Balance Is Shifting as Consumers Dropped

he last three years have been a roller coaster for the U.S. wine market. Distribution consolidation, with a new and somewhat competitive relationship with smaller and larger importers, which will ultimately limit consumers' wine choices, ran amok prior to the start of the pandemic. Many restaurants shuttered their doors in 2020 and deferred wine sales to the off-premise, which changed how wine was distributed for several years. Consumers also leaned into staying home and enjoying a good glass or two—or a cocktail—and are slowly coming back to the on-premise arena. Adding urban flight, the result was more restaurant and bar closings—and scaling back on all types of on-premise drinks programs—and the volatile wine sales market continues to evolve both on- and off-premise.

## **The General Context**

Early in 2020, the U.S. wine industry was flattening, shared **Mario Zepponi**, a wine merger advisor at the Santa Rosa-based Zepponi & Company. He added that there was a backlog in "wine inventories at distributor levels, coupled with a surge in unsold bulk wine inventories." However, he added that the pantry-stuffing phenomenon—omnipresent during the pandemic—also "served to absorb the oversupply of wine and shift the supply cycle into greater balance." He added that wine consumption in the U.S. continues to flatten. It is partially about consumers trading volume for quality and drinking fewer, but better-quality wines. However, the growth rate in wine consumption had been declining, although it was still positive when the pandemic hit. Sales of wine in the US are "now flat or moderately declining, depending on how it is measured.

The shift towards higher-priced wines has also waned," shared **Christian Miller**, the proprietor of the Berkeley-based Full Glass Research wine analyst firm. Winery depletions did not suffer across the board during the pandemic. Many stay-at-home consumers remained fans of bringing home what they wanted to drink.

Urban decline, the pandemic and steady consolidation continue to transform the wine sales arena. The sector's troubles won't vanish in the near future, maybe not even in the coming years

By LIZA B. ZIMMERMAN

Wine value is still up and higher than in 2019, but volume is down. So, people are drinking better, but drinking less. Some of this has to do with the health and wellness trend as well."

Mr. Miller added that some of this trend, "is due to rebalancing retail channels from pandemic conditions [which benefited from online and remote sales]. But some can surely be traced to a decline in visitors to wineries and wine regions, which is what drives club sign ups as well as take-out sales."

"Online and e-commerce sales declined from their pandemic peaks, but have stabilized at a much higher level overall than pre-pandemic," he added. "Continued growth is expected, but the question is whether wine can maintain its high share of e-commerce." consolidated in response to these pressures to accommodate the needs of retailers. This situation is resulting in a promotion of more private label-retail brands and a reduction in the number of third party-owned wine brands [and SKUs] that are carried in distributors' portfolios and available for purchase on retail shelves." The retail sector ruled the roost during the pandemic and producers, and distributors, are still trying to pivot back to the on-premise sales arena. "During the pandemic, our core business was retail," said **Brian Koziol**, a master sommelier and director of education and national accounts on-premise at Maverick, a Dallas-based, distributor operating in six U.S. states. "The on-premise business slowly came back for us. Today, we've seen a resurgence in the on-premise business. Many markets are seeing new, on-premise establishments open this year."

Smaller wine producers have continued to prioritize having access to niche distributors and importers.

"The crowded conditions and imbalance of negotiating power between producer and wholesaler in the big distributors creates demand from the supply side for small importers and distributors," said Mr. Miller.

Because of this, among other reasons, the number of small importers has continued to grow for a number of reasons: both because new ones are opening and because many distributors also tend to import a few wines. Both types help new imports get access to the oversupplied US wine market and tend to focus more on fine wine than big distributors who are often focused on spirits' lucrative profit margins, noted **Bart Broadbent**, the CEO of the Virginia-based importer Broadbent Selection.

As the wholesale tier has continued to rapidly consolidate over the past three or so years, "most distributors are selling off brands," Mr. Broadbent noted. Every additional SKU is costly to carry and "if you don't turn inventory three or four times a year you will get rid of a product," he explained. As the U.S. market has long had a steady supply of imports, "Small importers have a hard time being important to and getting attention from large distributors, so many have set up their own distribution operations in some of the larger markets and their home-state markets," noted Erik McLaughlin, the CEO of wine investment firm Metis LLC, based in Walla Walla, Washington. "At the same time other smaller distributors have continued to pop up over the years to serve smaller importers that can't find a home with large distributors." However, smaller importers have their limitations, cautioned Scott Ades, the president of the Napa-based Dalla Terra importer. "The flip side is your small company may be stretched thinly both financially and in terms of sales staff," he said. "They also may not be able to bring the wines to the small number of markets."

"Direct-to-consumer [DtC] sales from wineries [actually] had their first down year in 2022 since large-scale data became available," Mr. Miller noted.

**Liz Thach**, a master of wine and Sonoma-based consultant and president of the Wine Market Council, noted how a number of sales trends have shifted.

"In 2021 when everything opened up, wine sales went up and people came rushing back to tasting rooms," she said. "Also, premiumization continued and people started purchasing more expensive wines, most likely to treat themselves."

"Then in 2022, many Americans went to Europe and wine tourism dropped in the US," she added. "It has stayed low so far in 2023 also.

## Distribution and Import Tiers

As wholesalers continue to consolidate, the route to market has also become challenging for smaller wineries. Mr. Zepponi noted, as no surprise to the rest of us, that close to two thirds of wine distribution in the U.S. is controlled by three distributors. The big distributor boys have been feeding on smaller fish for some time, which is certainly more cost effective for their distribution and stocking needs.

"The larger retailers want to deal with a fewer number of distributors who are capable of servicing their entire regional or national retail store footprints," Mr. Zepponi said. "Thus, distributors have



## What the Future Holds

For cultural, demographic and economic reasons, the overall U.S. wine industry has seen a long boom. For a long time, a rising tide lifted - nearly - all boats.

12 In VA

"That period is probably over, as other products match wine's appeal or attributes and the demographic core of the boom is aging and entering years where income [and] wealth tends to decline,' Mr. Miller noted.

He said that he expected, "a number of years of either very low growth or modest decline, unless wine reinvents its appeal [positive] or under-40 consumers start abandoning wine or alcohol generally in large numbers [negative]. There will still be room for individual brands, wine regions or varieties to grow substantially, but it will largely be based on taking share from other wines [or in some cases other drink categories]."

Mr. Koziol notes how he thinks that U.S. wine programs are evolving. "Businesses are being more creative in promoting these offerings," he said. "As retailers promote them in wine club offerings and restaurants suggesting them as pairing options and/or as sampling sizes."

### The Reasons Behind This Change

The U.S. wine market has evolved for many reasons, according to Robert M. Tobiassen, the Washington D.C.-based president of the National Association of Beverage Importers. He is a wine industry veteran who has been interviewed by Corriere Vinicolo, this publication's Italian parent magazine, previously and was former in-house counsel for the Washington, D.C.-based Alcohol and Tobacco Tax and Trade Bureau, which regulates the sale of alcoholic beverages in the US.

"Change has resulted from several factors," he explained. "Yes, the Covid pandemic is one but the inflation fears, expiration of federal support to businesses and individuals, resumption of student loan payments and a supply chain that has really been a roller coaster ride with disruptions that quickly increased costs and limited availability."

He touched on concerns about labor management and transit, of all types, which now abound and translate into a nervous consumer.

"Even though the rate of inflation is dropping, many consumers are still under the opposite perception and are using more frugal and cost-savings behaviors when shopping," he added. "Wine purchases are impacted by this behavior as much as any other food or beverage commodity. More private labels are being sold. Consumers are making less impulsive purchases. Consumers are much more price conscious."

He pointed out several other trends that emerged during the pan-

### O F W I N E W O M E N

**MEET THE FOUNDER OF THE AUSTRALIAN WOMEN IN WINE AWARDS** AND OF THE FABULOUS LADIES' WINE SOCIETY

## **MEDAL OF THE ORDER OFAUSTRALIA** for Jane Thomson for Her Work in Oenology

She is only the fifth woman to receive such a recognition in the wine sector. Famous for her commitment to diversity and inclusion, her determination has given Australian wine women a voice for the past 11 years, and a push for change

ane founder of the Australian Women in Wine Awards (AWIWA) and The Fabulous Ladies' Wine Society, was awarded last June the Medal of the Order of Australia (OAM) for her services to oenology. She is only the fifth woman to have received this honour in the wine business - out of 45 awards in total. Renowned for her tireless work in advocating for diversity and inclusion in the wine industry, Ms. Thomson's steely resolve has given women in wine a voice and a platform for change over the last 11 years.

"I am incredibly honoured to receive this award," she said. "To be recognised was such a { surprise and I'm thrilled to be provided a platform and the

Thomson, { able to further celebrate and draw attention to the work of women in the wine industry." Wine writer and AWIWA board member, Jeni Port said that, "Before Jane Thomson there was little to no national debate about diversity and inclusion in the wine industry. Women enter the industry in strong numbers but leave way too soon. They need female role models and leadership to succeed, and Jane provides this. She is one of the strongest, most accomplished women I have ever had the pleasure to work with." Rebekah Richardson, fel-

low AWIWA board member and Winemaker added that, "Jane's focus on lifting up all women in wine benefits the whole industry. She has

energy to make sure that the amazing women within wine don't go unnoticed."

Gender inequality (senior job opportunities, talent drain and pay gap), and the lack of meaningful support for women spurred Ms. Thomson to launch the AWIWA, to bring wider attention to women in wine. A psychologist turned wine communications professional from New South Wales – with a vineyard-owning father-, she was the perfect woman for the job.

"She showed the leadership that was required to jolt the Australian wine industry upright, to take note and to act. She has led the national discussion and continues to push for change" Ms. Port added.

It took grit and determination to be taken seriously in the industry to begin with, "In the face of scepticism and opposition, Jane has remained steadfast in her mission to empower women and create opportunities for their advancement." said **Sarah** Collingwood, former AWI-WA board member and CEO of Four Winds Vineyard.

Successfully increasing the industry's overall awareness of gender disparity is one thing, but Ms. Thomson warns that that is not enough. "The talent drain of women

in the industry won't be fixed by just talking and believing in diversity," she said. "It needs funding. Without it, we won't have a diversity of people in top decision-making roles, and we will lack the innovative and strategic thinking necessary to see us through the challenges we are facing now and in the future."

In an industry, which previously did little to support or celebrate the work of women, Thomson has seen some change, but there is still a long way to go. Only last week she called out the lack of diversity at the Wine Australia CEO task force committee, which included one woman out of 16 members called together to discuss the industry's future.

Thomson hopes this award will encourage more regional women and women in STEM and agriculture to be nominated and recognised. "You can't be what you can't see, and I hope this award inspires other women to pursue their chosen career with passion and persistence."

The Fabulous Ladies' Wine Society founded by Jane Thomson is one of the world's women's wine associations that participated during SIM-EI in Milan in the forum organised by Le Donne del Vino in collaboration with Unione Italiana Vini. On that occasion a partnership agreement was signed uniting eleven women's associations from all over the world

demic.As consumers stayed home during the pandemic, they also learned to make a good cocktail. So, he adds that consumers are selecting drinks by occasions and may well buy a highball instead of a glass of wine while out.

"Several bar servers that I spoke with confirm this," he said. "That is, they mainly sell beer and cocktails. There is also a 'group think' mentality here. If one or two drinkers in the group orders a glass of wine, then the group starts to talk about whether to purchase a full bottle."

Consolidation of the wholesale tier has continued at a rapid pace and is affecting market access for both domestic and imported wine brands.

"Large wholesalers are continuing to buy smaller, regional wholesale operations," he noted. They are often looking to "sign on new exclusive distribution agreements with foreign producers which effectively enable the wholesaler to manage the marketing of competing brands of similar products."

There continues to be an abundance of imported wine brands on the U.S. market, he noted. However, Covid brought to the forefront many difficult discussions about "agreeing on margins and allocation of costs of the supply chain," he explained. "Contracts between importers and wholesalers did not address unexpected new costs and expenses associated with specific shipments of wines or other beverage alcohols. Contracts failed to allocate risks."

The past few years have been a bumpy ride. Such commercial changes may create a "new" wine market in the United States. Those who will want to sell their own labels will have to choose the right partners, maybe diversifying- having a small importer able to distribute in some key states, and at the same time trying to follow the classical path of a large importer and large distribution. It won't be easy and nothing is to be taken for granted in the coming months, maybe even in the coming years.



Jane Thomson Founder of The Fabulous Ladies' Wine Society and the Australian Women in Wine Awards

## ORGANOLEPTIC AND FRESHNESS IMPROVEMENT

with the Use of Non-Saccharomyces Yeasts in White Wines from Warm Climates

By **C. ESCOTT, C. VAQUERO, I. LOIRA, J. M. DEL FRESNO, F. PALOMERO, C. LOPEZ, C. GONZALEZ, A. MORATA** Enotec UPM. Chemistry and Food Technology Department, ETSIAAB, Universidad Politécnica de Madrid; carlos.escott@upm.es

## Introduction

Some strains of *Lachancea thermotolerans* can naturally reduce the pH of wine by forming lactic acid and increasing the total acidity. This good metabolism is very convenient nowadays due to global warming which produces grapes with low acidity and

high alcohol (*Fig 1*)[1]. The benefits of binary and ternary inoculations that enhance other non-specific metabolites of *Saccharomyces* yeast in addition to acidity are also being studied to produce more complex wines (*Fig 2*)[2,3].



Fig 1. Accumulated lactic acid formed during fermentation in the 1 L test (17 °C and 50 mg/L of total SO2) and the resulting effect on pH.



Fig 2. Graphical summary of the experimental plan: (A) sequential inoculation (binary), (B) sequential co-inoculation (ternary).



## Results

For this purpose, different trials were carried out and four selected strains of Lachancea thermotolerans were compared with two commercial strains of the same yeast at different temperatures and sulphur concentrations and, on the other hand, sequential binary inoculations and ternary co-inoculations were carried out with different non-Saccharomyces, with two types of nutrients and with a selected Saccharomyces cerevisi*ae* as control and fermentation finisher in both cases.

The yeasts were evaluated under different oenological conditions, including the use of different types of nutrients, measuring lactic acid production and fermentation yield at two fermentation temperatures (17 and 27 °C), and in the presence or absence of sulphites (25 and 75 mg/L), as well as binary and ternary inoculations fermented at 16 °C and with 50 mg/L sulphites.

Lactic acid production was found to be dependent on yeast populations, being higher when the microbial population we implanted was  $\geq$  7-log CFU/mL (*Fig 3*), acidity yields were higher at lower sulphur content and there is a close relationship between the use of one of the nutrients to further enhance lactic acid production (*Fig 4*).

In ternary co-inoculations, the yeast Lachancea thermotolerans was the most competitive and there were synergies with co-inoculation of M. pulcherrima with *L. thermotolerans* and very significant inhibitions with H. vineae and L. thermotolerans in lactic acid production (Fig 5). Fermentative ester production was higher at 27 °C and ternary co-inoculations maintained more stable positive aromatic esters compared to binary inoculations. We also observed that those co-inoculations that had received the nutrient containing diammonium phosphate in their composition generated a higher acidification by the yeasts (Fig 6).



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Fig 4. The lactic acid produced in the 10 mL fermentations at two temperatures and two SO<sub>2</sub> contents.



Fig 5. Increase in lactic acid from the different fermentations both with their error bars.

Fig 3. Cell counts of each yeast (CFU/mL) along fermentation compared with the production of lactic acid by Lt L3.1 (squares) and error bars, showing the range of lactic acid values for all the tested strains in the 1 L trial.



Fig 6. Increase in lactic acid from the different fermentations both with their error bars. The two coloured rectangles in the figure show the two high levels of lactic acid production.



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## Conclusions

There is a wide world to discover within non-*Saccharomyces* that is a powerful biotool to modulate wine. The results obtained also show the variability between strains and species (binary and ternary) in terms of acidification and volatiles, but also how relevant oenological parameters such as temperature, SO<sub>2</sub> content, yeast population, different types of nutrients affect their fermentation performance, giving rise to further research.

## References

1. Vaquero, C.; Loira, I.; Bañuelos, M.A.; Heras, J.M.; Cuerda, R.; Morata, A. Industrial Performance of Several *Lachancea thermotolerans* Strains for pH Control in White Wines from Warm Areas. *Microorganisms* **2020**, *8*, 830, doi:10.3390/ microorganisms8060830.

2. Vaquero, C.; Escott, C.; María Heras, J.; Carrau, F.; Morata, A. **Co-inoculations of** *Lachancea thermotolerans* with different *Hanseniaspora* spp.: Acidification, aroma, biocompatibility, and effects of nutrients in wine. *Food Res. Int.* **2022**, *161*, 111891, doi:10.1016/J.FOODRES.2022.111891.

3. Vaquero, C.; Loira, I.; Heras, J.M.; Carrau, F.; González, C.; Morata, A. **Biocompatibility in Ternary Fermentations With** *Lachancea thermotolerans*, Other Non-*Saccharomyces* and *Saccharomyces cerevisiae* to Control pH and Improve the Sensory Profile of Wines From Warm Areas. *Front. Microbiol.* **2021**, *12*, 656262–656297, doi:10.3389/fmicb.2021.656262.

## PREVIEWS

### (BIO)ACIDIFICATION OF WINES

Dr. Ana Hra nilovic, University of Adelaide - Australia

Insufficient acidity in grapes from hot climates is usually corrected by the addition of tartaric acid during winemaking, and less commonly by the addition of other organic acids. An alternative approach is presented that involves bio-acidification with some strains of *Lachancea thermotolerans* through the production of lactic acid during fermentation: an interesting and sustainable oenological solution to combat the lack of acidity in wines and microbial threats. Ana Hranilovic, from the University of Adelaide, conducted the research in collaboration with the University of Bordeaux "All acids are equal, but some are more equal than others: (Bio) acidification of wines", with her co-authors Marina Bely, Isabelle Masneuf-Pomarede, Warren Albertin and Vladimir Zhiranek.

The results provided take into consideration the composition of wines, not only in terms of acidity and ethanol, but also of total anthocyanins and sensory descriptors, comparing the classical methods with different ways of using *Lachancea thermotolerans*.



WATCH THE VIDEO

### OPTIMISED EXTRACTION AND PRELIMINARY CHARACTERISATION OF MANNOPROTEINS FROM NON-SACCHAROMYCES WINE YEASTS

Carla Snyman et al.; South African Grape and Wine Research Institute – South Africa

The use of non-*Saccharomyces* yeast species for the improvement of wine technological and oenological properties is a topic that has gained much interest in recent years. Their application as co-starter cultures sequential to the inoculation of *Saccharomyces cerevisiae* and in ageing on the lees has been shown to improve aspects such as protein stability and mouthfeel.

These contributions have frequently been associated with higher levels of polysaccharides, specifically the cell wall-derived mannoprotein. Furthermore, mannoprotein structure and composition has been shown to vary between yeast strains, which in turn may influence their behaviour in the wine matrix. However, non-*Saccharomyces* yeasts are typically weak fermentors and are frequently out-competed in the fermentation medium.

An alternative strategy to their use as co-starter cultures is the isolation of the compound of interest for exogenous application to wine. Indeed, the addition of exogenous mannoprotein-containing products derived from the cell wall of the wine yeast *S. cerevisiae* is a fairly common winemaking practice. Nevertheless, the extraction of mannoproteins from non-*Saccharomyces* yeasts has not yet been well described.

This study aimed to optimise the extraction of mannoproteins from four non-*Saccharomyces* strains, and to perform a preliminary investigation into the compositional differences of the mannoproteins obtained from the different species.

Find out which combined methods with varied parameters of ultrasound and enzymatic extraction with  $\beta$ -glucanase to optimise mannoprotein yield were adopted and gave the highest yield of mannoproteins from all species, as well which differences in carbohydrate/ protein ratios between species were identified. Is their impact on the carbohydrate/protein ratio in particular an important factor to consider for applications such as wine protein haze reduction and tartrate stabilisation?



### INFLUENCE OF NITROGEN SOURCE ON EXPRESSION OF GENES INVOLVED IN AROMA PRODUCTION IN SACCHAROMYCES UVARUM

A. Coral Medina et al., Universite de Montpellier – France & University College Cork – Ireland

*Saccharomyces uvarum* has interesting properties that can be exploited for the production of fermented beverages. Particularly, the cryotolerance and capacity to produce high amounts of volatile compounds offers new opportunities for the wine industry. Besides the contribution of the nitrogen source to primary metabolism, some nitrogen compounds are precursors of volatile molecules that produce aroma. The nitrogen compounds assimilated by yeast are classified as rich or poor nitrogen sources depending on how they affect the growth and the nitrogen regulation mechanisms. In *S. cerevisiae*, the nitrogen metabolism is well understood but less is known about these pathways in *S. uvarum*.

The aim here is to understand the nitrogen metabolism in *S. uvarum* and the effects of the nitrogen source on the production of aroma volatiles at low temperature; the focus is on temperatures below 20°C since this is relevant for wine production.

This study increases understanding of the importance of the nitrogen source in the aroma production of *Saccharomyces* yeasts and broads the knowledge on *S. uvarum* aroma production for applications in wine industry.





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WORLD TRAD

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## WORLD WINE IMPORTS FROM JANUARY TO JUNE, 2023

## A WORSENING SITUATION

The April-June quarter had worse figures than the already negative ones released in March, with widespread losses on almost all main markets. The impact of destocking in North America added to the chronic hardships of China

By CARLO FLAMINI – Wine Observatory Unione Italiana Vini

fter a first quarter that closed in the red between April and June, world wine imports took another step in the wrong direction compared to March, according to the UIV-Vinitaly Wine Observatory, worsening both in volume (moving from -5% to -9%) and value (down by 7%). Since the beginning of the year, the total volume imported by the main countries (excluding Russia, which has blacked out customs data since February 2022) reached 27 million hectolitres, -2% over the same period in 2022, and \$11.6 billion, down by 4.5%. While packaged still wines

performed the worst in March, sparkling wines experienced the slowest volumetric trend in the second quarter of the year (-10% compared to -9% for still wines). Bulk wines, which were already struggling at -2% in March, were at -7%.

The overall volumetric figure for the second quarter of 2023, combining total imports from all categories, equated 14.2 million hectolitres—the lowest since 2013 for similar periods. Aside from the Chinese market, which has been contracting for over two years, the United States has been influencing this dynamic with a sharp reduction of its supply of sparkling and still wines. So have Japan and Canada. The United



Data on countries mentioned in the story are available on www.wineobservatory.com

## WORLD TRADE: First semester

-			,000 Litres			,000 US\$			US\$/litre	
<		2022	2023	% Chg.	2022	2023	% Chg.	2022	2023	% Chg.
	USA	91,806	81,957	-10.7	881,856	805,947	-8.6	9.61	9.83	2.4
(1)	UK	74,577	65,746	-11.8	553,867	539,756	-2.5	7.43	8.21	10.5
	Japan	18,740	17,898	-4.5	328,138	346,867	5.7	17.51	19.38	10.7
2	Germany	30,834	30,238	-1.9	221,040	237,668	7.5	7.17	7.86	9.6
	Switzerland	10,315	9,948	-3.6	110,087	119,750	8.8	10.67	12.04	12.8
	Canada	10,489	8,972	-14.5	107,525	94,050	-12.5	10.25	10.48	2.3
$\mathbf{X}$	France	16,487	18,669	13.2	61,943	81,059	30.9	3.76	4.34	15.6
m	South Korea	4,108	3,730	-9.2	48,104	50,601	5.2	11.71	13.57	15.8
	Hong Kong	1,348	1,424	5.6	29,832	41,012	37.5	22.13	28.80	30.2
M	China	4,272	2,941	-31.2	42,556	31,798	-25.3	9.96	10.81	8.6
	Brazil	2,187	2,650	21.2	11,225	15,722	40.1	5.13	5.93	15.6
n	Total	265,163	244,173	-7.9	2,396,172	2,364,231	-1.3	9.04	9.68	7.1
			000 Litros			2211000			LIS¢ /litro	

	,000 Little5			,000 03\$			000/11110		
2022	2023	% Chg	2022	2023	% Chg	2022	2023	% Chg	

WORLD IMPORTS: % CHG. VOLUME BY QUARTER



Kingdom slightly improved its situation in the second quarter compared to March. The United States and Canada are continuing destocking after an important acquisition phase triggered by the enthusiasm recorded in 2022, which quickly started waning in the first part of the year.

## Still Wines By Main Countries

In Germany, when it came to still wine, Italy closed the first half of the year at zero, cancelling the advantage gained in the first quarter (+4%), and lost ground in values (-5.6%) due to a 5% reduction in average prices. The main competitors, France (-3%) and Spain (-2%), suffered lower gains as well, with Paris also slipping in terms of volume (-6%), while Madrid managed to maintain last March's positive figure (+4.6%).

In the United Kingdom, the total market fell by 7% in volume (it was -12% in March), reflecting generally rising values associated with the weakness of the pound, forcing importers to buy at a higher price. Italy reversed the -7% deficit of the first quarter with a 2% gain, while France moved up from -20% to -9%.

Spain experienced a positive trend (+9%), similar to New Zealand (on the premium side) which fell from +15% experienced in March to +8%.

Imports of wine from Belgium, a trading and customs clearance hub for many suppliers, including Italian ones, continued at a steady pace, while the Australian (-30%) and Chilean (-37%) trends remained deep in the red.

Despite some improvement in the April-June quarter, the general trend for Italian wines nevertheless continues its progressive decline when looking at the curve by quarters, stagnating at the 30 million litre threshold against a 40-50 pre-COVID and post-COVID average.

In the United States, Italy is the only large supplier not showing any progress in volume, with a heavy -11% drop compared to a first quarter that nearly hit the zero line, showing a similar negative scenario in terms of value as well. France's growth also shrank (from +8% to zero) while New Zealand sustained its positive dynamic (+35% not only in volume but also in value). The curve by quarters indicates a return to pre-pandemic values, following a 2022 which had already experienced a deflating momentum compared to the rising figures felt throughout 2021. On the Canadian market, the largely negative variation for Italian wines (-15%) was seen in comparison with a first half of 2022 that surfed on a +10% wave over 2021. French wines (-13%) and American wines (-18%) were also down, with a deflating trend in values for the latter (-13%), overtaken by Paris at the top of the list (although also suffering -4%). Basically, the market is slowly returning to pre-2022 volumes. The Swiss market contracted slightly (-4.6%), with price reductions involving Italy and Spain. The volume balance is turning negative for Italian wines (-1% from +2% in March),

while Spanish bodegas remain in the red (-5%). The French are the only ones slowing down a declining trend, moving from -8% to -4.5%.

Looking at the Asian market, China confirmed once more its downhill trend in imports, with an overall drop of 33% (759,000 hectolitres), impacting all the main suppliers: France -26%, Chile -41%, Italy -36%, Spain -55%. American supplies, which had recorded +45% in March, also deflated.

Japan is also reversing its positive trend of the first quarter, and Italy dropped from +14% to -2.5%, while the French situation also worsened, at -12%, from -3% in March. The declines in the United States (-30%), Chile (-16%) and Australia (-21%) were confirmed, while only Spain remained positive (+8%).Values are rising overall, driven by the general weakness of the yen.

The situation continued retracting in South Korea over 2022, where it was already slowing down compared to an extraordinary 2021. For Italy, the volume figure was a heavy -26% drop, but the double-digit downward trend involved all the main suppliers, with the total market down 18%.

## Sparkling Wines By Main Countries

Sparkling wines in Germany are experiencing an overall inflationary trend (with a general average of +11%). Italy (+12% on the list) ate up what little growth it had brought home in March (+2%), gliding to zero, while the French dropped into losses. The Cava trend improved, rising from -7% to -2%. The curve by quarters potentially indicates the maintenance (albeit difficult) of the 5-6 million litre per quarter threshold, which we've seen since the beginning of the pandemic. In the United Kingdom, sparkling wines are still facing a negative trend, although showing some first signs of improvement. From -20% in March, they climbed to -12% in June, with Italy suffering the most, although significantly improving from the -30% of the first quarter, rising to -18%. France holds on, but remains in the negative at -5%, while the brilliant start of the year for Belgium imports deflated to zero. For Prosecco, the accounts improved, though still negative. Volumes were -16% from -26% in March, with direct shipments from Italy at -17% (from -29%) and re-exports from Belgium at -5%, in this case worse than the +9% in March.

	USA	354,739	338,817	-4.5	2,383,914	2,429,266	1.9	6.72	7.17	6.7
	UK	305,004	284,222	-6.8	1,530,823	1,495,652	-2.3	5.02	5.26	4.8
	Germany	237,518	235,788	-0.7	888,821	850,482	-4.3	3.74	3.61	-3.6
ш	Canada	142,368	116,737	-18.0	964,711	790,400	-18.1	6.78	6.77	-0.1
	Switzerland	49,472	47,203	-4.6	524,166	519,790	-0.8	10.60	11.01	3.9
	China	113,109	75,877	-32.9	617,374	509,329	-17.5	5.46	6.71	23.0
	Hong Kong	15,700	15,150	-3.5	490,919	493,542	0.5	31.27	32.58	4.2
	Japan	79,445	71,591	-9.9	499,341	473,892	-5.1	6.29	6.62	5.3
$\bigcirc$	France	49,704	50,977	2.6	270,176	265,932	-1.6	5.44	5.22	-4.0
m	South Korea	28,311	23,214	-18.0	241,664	211,817	-12.4	8.54	9.12	6.9
	Brazil	68,034	64,005	-5.9	201,077	198,004	-1.5	2.96	3.09	4.7
	Total	1,443,403	1,323,581	-8.3	8,612,986	8,238,106	-4.4	5.97	6.22	4.3

			,000 Litres		,000 US\$			US\$/litre		
-		2022	2023	% Chg.	2022	2023	% Chg.	2022	2023	% Chg.
<	UK	237,793	220,376	-7.3	341,127	285,820	-16.2	1.43	1.30	-9.6
	Germany	329,869	362,771	10.0	236,726	257,850	8.9	0.72	0.71	-1.0
$\checkmark$	USA	242,115	205,830	-15.0	218,831	158,074	-27.8	0.90	0.77	-15.0
	France	232,796	221,150	-5.0	138,049	128,183	-7.1	0.59	0.58	-2.3
	China	63,804	47,338	-25.8	65,320	44,044	-32.6	1.02	0.93	-9.1
	Canada	53,532	56,255	5.1	39,648	37,061	-6.5	0.74	0.66	-11.0
m	Switzerland	28,192	23,299	-17.4	44,011	36,563	-16.9	1.56	1.57	0.5
	Japan	19,475	15,403	-20.9	20,972	17,437	-16.9	1.08	1.13	5.1
	Total	1,207,575	1,152,422	-4.6	1,104,683	965,032	-12.6	0.91	0.84	-8.5
Agg	gregated total	2,916,141	2,720,176	-6.7	12,113,841	11,567,369	-4.5	4.15	4.25	2.4

Note: % change based on USD. Please check the single countries for their currencies. Since the outbreak of the war in Ukraine, Russia stopped publishing custom data. All the data in these pages do not take Russia into account.

### ORLD TRADE W



3% 0% -0% -0% 2% -2% 3% -3% -3% -3% -4% -6% -7% -7% 1Q-20 2Q-20 3Q-20 4Q-20 1Q-21 2Q-21 3Q-21 4Q-21 1Q-22 2Q-22 3Q-22 4Q-22 1Q-23 2Q-23

**BULK WINES: % CH. VOLUME BY QUARTER** 

47% 37% 15% 13% 5% 4% -0% -0% -2% -2% -5% -7% -10%

1Q-20 2Q-20 3Q-20 4Q-20 1Q-21 2Q-21 3Q-21 4Q-21 1Q-22 2Q-22 3Q-22 4Q-22 1Q-23 2Q-23

In the United States, the June figure was a heavy setback compared to a March which, all things considered, was showing signs of health: for Italy, +13% was down to -5%, with April-June failing to replicate the extraordinary result of the corresponding quarter in 2022 above the 300,000 hectolitre mark. The downward trend for Champagne is widening (10 points to -30%), while Spanish wines remain positive. In Canada, after a strong impe-

tus in 2022 for sparkling wine imports, we are beginning to turn back. The total market is at -15%, with France at -13%,

 $\langle$  Italy at -18% and the more af-  $\langle$ fordable Spaniards containing their losses to -5%.

Lastly, in Japan, the negative trend persists, although it is in a phase of recovery compared to the heavy March figure: Italy from -22% to -7%, Spain from -8% to -6%, while Champagne is losing its lustre, going from +14% in March to a mere +1.6% in June.

## **Bulk Wine**

**By Main Countries** In Germany, Spain and Italy continued to send large quantities of product, driven by still heavy stocks, especially on the

red side as far as Italy is concerned. For ordinary reds, Italian volumes were up 10%, and prices were down by the same degree. For whites, the progressive deflation of Italian prices led to a meagre +12% bump, with a very strong impulse given to Spanish products, which grew in volume by almost 50%. In the United Kingdom, bulk wine suffered heavy setbacks, particularly for products from the American continent and South Africa. Australians were stable, with bloodletting price reductions (-27%); only New Zealanders showed a broadly positive trend.

UNITED KINGDOM

	,000 litro	es	,000 Poui	nds	Pound	s/litre
	2023	% Chg.	2023	% Chg.	2023	% Chg.
France	9,944	-5.0	213,127	4.6	21.43	10.2
Italy	39,431	-17.8	153,990	-2.9	3.91	18.0
Belgium	8,274	0.5	36,777	8.9	4.45	8.4
Spain	6,798	14.5	20,945	24.3	3.08	8.5
South Africa	337	-35.2	2,115	0.4	6.27	55.0
Australia	235	12.1	1,022	18.6	4.35	5.8
USA	92	-33.3	919	-37.5	9.97	-6.4
New Zealand	112	199.7	685	207.8	6.14	2.7
Germany	37	-92.2	601	-73.6	16.36	236.7
Others	486	-20.1	6,676	-7.5	13.72	15.9
Total	65,746	-11.8	436,856	2.3	6.64	16.0

## TLED WINES BOT

-17%

## JNITED KINGDOM

	,000 litre	es	,000 Pou	nds	Pound	s/litre
	2023	% Chg.	2023	% Chg.	2023	% Chg.
France	54,336	-9.1	428,806	7.7	7.89	18.5
Italy	60,001	2.2	177,687	8.3	2.96	6.1
Spain	40,014	9.5	128,884	16.5	3.22	6.5
Belgium	32,226	21.0	94,085	19.8	2.92	-1.0
New Zealand	16,001	8.4	80,807	14.4	5.05	5.5
Australia	12,754	-28.9	44,894	-17.7	3.52	15.8
Chile	15,383	-37.1	42,272	-37.8	2.75	-1.0
Portugal	9,247	9.7	33,891	29.1	3.67	17.6
South Africa	11,176	-18.8	32,320	-24.4	2.89	-6.9
Argentina	8,905	-40.0	31,458	-25.7	3.53	23.7
Others	24,178	-16.9	115,780	-7.7	4.79	11.0
Total	284,222	-6.8	1,210,882	2.5	4.26	10.0

[*************************************	L	JSA				
	,000 litı	res	,000	5	\$/litre	
	2023	% Chg.	2023	% Chg.	2023	% Ch
France	16,482	-30.1	454,798	-13.5	27.59	23.8
Italy	53,842	-5.1	297,797	-0.6	5.53	4.8
Spain	9,756	6.4	42,190	-2.8	4.32	-8.7
Germany	250	-32.1	1,307	-31.2	5.23	1.3
Australia	153	-27.2	875	-27.4	5.73	-0.3
Others	1,475	-14.1	8,980	-8.6	6.09	6.5

н. g. Total 81.95 -10.7 805.947

## USA

,000 li	tres	,000	6	\$/litre		
2023	% Chg.	2023	% Chg.	2023	% Chg.	

## **SPARKLING WINES: % CH. VOLUME BY QUARTER**

### France 67,025 0.3 796,308 14.3 11.88 14.0 107,967 -11.0 744,350 -9.2 1.9 Italy 6.89 New Zealand 39,330 35.6 289,407 34.1 7.36 -1.1 21,278 0.9 143,014 8.4 6.72 7.4 Spain 20,173 -15.3 102,887 -12.8 5.10 2.9 Argentina -16.5 101,780 -22.2 3.20 -6.9 Australia 31,836 Chile 18,231 -4.1 62,865 -6.0 3.45 -2.1 Portugal 10,931 -10.4 57,081 -10.3 5.22 0.1 Germany 7,823 -2.3 37,318 -2.1 4.77 0.2 South Africa 3.2 -2.2 5.34 3,780 -5.2 20,179 74,077 -9.0 7.09 -0.5 Others 10,444 -8.5 Total 338,817 -4.5 2,429,266 1.9 7.17 6.7

## **CANADA**

	Litres		\$ Canadi	an	\$ Canad	\$ Canadian/litre	
	2023	% Chg.	2023	% Chg.	2023	% Chg.	
France	24,152,691	-12.6	261,441,780	-4.1	10.82	9.7	
USA	21,439,992	-18.2	251,678,143	-13.3	11.74	6.0	
Italy	26,359,627	-14.8	219,186,488	-13.9	8.32	1.0	
Spain	8,693,050	-7.8	69,759,143	0.7	8.02	9.2	
New Zealand	6,079,105	-11.5	62,362,138	-12.7	10.26	-1.3	
Australia	7,488,417	-39.8	53,471,737	-39.0	7.14	1.2	
Chile	6,645,454	-33.1	34,065,502	-34.1	5.13	-1.6	
Argentina	4,391,850	-31.1	33,115,113	-27.3	7.54	5.5	
Portugal	5,145,300	-10.0	32,446,042	-7.7	6.31	2.5	
South Africa	2,452,691	-18.4	15,280,917	-14.3	6.23	5.1	
Others	3,889,468	1.6	32,110,225	4.3	8.26	2.7	
Total	116,737,645	-18.0	1,064,917,228	-13.2	9.12	5.9	

## GERMANY

	,000 litres		,000 Eui	ro	Euro	/litre
	2023	% Chg.	2023	% Chg.	2023	% Chg.
Italy	105,634	-0.4	355,120	-5.6	3.36	-5.2
France	43,880	-6.2	183,248	-9.1	4.18	-3.1
Spain	40,038	4.6	93,103	2.7	2.33	-1.8
Austria	12,379	-5.1	35,306	4.8	2.85	10.4
USA	4,364	-10.2	25,785	7.4	5.91	19.5
Portugal	8,016	3.9	23,594	5.0	2.94	1.1
South Africa	4,415	-22.0	15,871	-9.1	3.60	16.6
Australia	3,482	66.8	13,635	40.0	3.92	-16.1
Chile	2,271	-16.2	9,943	7.1	4.38	27.9
Greece	2,692	4.4	6,348	9.9	2.36	5.3
Others	8,619	11.9	24,857	7.6	2.88	-3.8
Total	235,788	-0.7	786,810	-3.3	3.34	-2.6

S H O W **O** N

# IN THE VINEYAR AND IN THE CELLA

## BEKAERT

Guarantee Of Top Quality With Bezinal® Vineyard Wires

very winegrower knows that the choice of materials for his vineyard represents a relevant investment that should guarantee a long lifetime, with the best performances of support and stability. Today you can increase the lifetime of your trellis by relying on the superior quality and performances of Bekaert Bezinal® vineyard wires. Thanks to the high tensile strength, you can reduce the wire diameter while maintaining the same breaking load. In this way, with the same weight Bezinal<sup>®</sup> wires provide you

from 40% to 120% more meters per coil compared to heavy galvanized wires. You will save on your time and operational costs thanks to the reduced elongation (4-5%), which will limit the need for retensioning activities in the fields. All our wires feature the advanced Bezinal<sup>®</sup>2000 coating. This new generation zinc-aluminum alloy is a Bekaert exclusive, and it provides superior resistance to atmospheric corrosion and chemicals.Tests in certified laboratories proved that Bezinal<sup>®</sup> wires last from 4 up to 8 times more than heavily

galvanized wires, and twice the time compared to standard zincaluminum coated wires. Bekaert has been producing steel wires for over 130 years, and we are present globally with innovative, hightechnology products. When you choose Bezinal® vineyard wires, you are relying on a recognized technology leader, which represents a guarantee of certified and constant quality. Info:

Stefano Frascoli mob. +39 335 7526676 stefano.frascoli@bekaert.com





## CELLI Combined Solutions For Grassing Between The Rows

preparation that Celli designs, manufactures and distributes throughout the world is increasingly expanding towards combined machines. Being able to carry out different soil preparation in a single step, they guarantee operators savings from many points of view: in time and resources, as well as - also with a view to more sustainable soil preparation - in consumption (fuel) and of emissions. Among these multifunctional solutions, some are ideal for the vineyard, such as Minigo, a fixed power harrow proposed in combination with a pneumatic seeder, to allow soil preparation and sowing in a single pass. Minigo is a

he wide range of proposals for soil { small machine (the maximum width is 1.80 m), and for this reason it represents an easy-to-handle solution that responds to current market needs for refining the soil between the rows. This is a machine capable of operating with low-power tractors (between 30 and 80 hp), working the soil at a depth of approximately 26 cm and then levelling it using the rear roller, adjustable with pins. The combination of power harrows and seeders today represents one of the main lines of development of the Celli range, as also demonstrated at the latest edition of Eima where the company presented the new solution (of larger size and power) Maxi + Storm.

## **ENOVENETA**

Automatic Plants And Industry 4.0 For Winemaking Sector



## **ERO**

## **Binger Pre-Pruner Now Features** The VITIvision System

his season, the German company Ero GmbH offers a new, camera-based opening system for the Binger VSL 07 P pre-pruner. The system { Therefore, pruning can already goes by the name VITIvision and { provides significant relief for the driver. Work quality improves and the vineyard terrain is protected from damage. The driver can focus solely on steering the tractor while ensuring consistent work efficiency throughout the work day. The Binger VSL 07 P prepruner is especially suitable for

cordon-trained vineyards. It trims the vineyard to the desired height. The exposed shearing disks are not susceptible to blockage. be done before leaf fall. Thanks

uring the last years the requests about "Industry 4.0" production plants are increased. For that reason we've adapted our machineries to Industry 4.0 requirements. But we not only provide Industry 4.0 ready machineries, we can realize complete production plants with these requirements. Designing the entire plant, every technology will be integrated as its best. But it's not just about Industry 4.0. Now medium and big wine producers look for the total automation of the working process, in order to simplify the employees working load and also to have a more efficient management of the entire production process. We can find the maximum expression of this in the "Fap" (Full Automatic Process), a pressing system composed by three or more pneumatic presses that allows to manage all the grape pressing process automatically, from the grape loading to the washing of the presses. The "Fap" system is managed by a software that can handle autonomously all the working phases. The software, together with appropriate accessories like automatic valves, level probes, weighing cells and flow meters, allows to realize a fully automatic pressing centre. Info: www.enoveneta.it

to numerous options, Binger offers the right model for every application. In addition to the Binger pre-pruner, Ero GmbH also offers the Viteco cane pruner for Guyot training. With Viteco, time savings of up to 50% are possible. Info: Luca Peretto, phone: +39 348 3108971, luca.peretto@ero.eu





## NORTAN

New Syncrocap Capsule Distributor



hanks to an innovative mechatronic project (Feds Technology), the new Syncrocap distributor can automatically adapt to the different capsules to be processed, thus reducing the format change times up to 80% and the imperfections due to human intervention. Compared to standard capsule distributors, the new Syncrocap represents a significant step forward for the whole sector. Each component has been completely rethought and redesigned around the following objectives: processing optimization, increase in reliability, reduction and simplification of maintenance, minimization of the format change times for operators. The main heart of the innovation is the fully electronic separation and distribution group, where a

new proprietary mechatronic technology (Patent Pending) called F.e.d.s. Technology (Fully electronic distribution system) has been implemented. This leads to a reduction in setting and format change times by the operator of about 80% and to the complete elimination of errors and problems that may arise due to rough adjustments. Furthermore, thanks to a series of algorithms that encompass all Nortan experience, all mechanical devices have been eliminated and the concept of "Electronic Cam" has been introduced, which allows to automatically adapt the timing and parameters of the various components based on the type of capsule in work. The 40% reduction in details and the optimization of production processes has led to a significant increase in reliability.

## ALL THE REASONS TO TRAVEL TO AMSTERDAM IN NOVEMBER AT THE WBWE

If you are a wine professional, this is that time of the year when you start to wonder



Here we offer you some tips on how to solve your doubts.

**Choose your battles wisely**. We are living in turbulent times, with too many changes, distractions, and unexpected twists and turns in our business. Too many trade fairs, too. So it is important to focus on the shows that offer the highest profitability for our business. At the WBWE, *the* wine without the nonsense, we specialize in delivering maximum potential in the shortest possible time. A two-day event where you can discover the world's harvest, take the pulse of the market (and your competitors), analyse prices and trends, and meet key international decision-makers in person.

**Be ahead of the curve**. At the WBWE, we were among the first to talk about private labels, bottling at destination, alternative packaging, sustainability and logistics when no one was paying attention to these issues. Now they are at the centre of the debate at major international trade fairs. And those entrepreneurs who were attentive are today leading the change with their companies.

A selection of machinery, equipment, services and products available on the market, curated by the manufacturers

## **METALUX CAPSULE**

Capsules, the new "Green Collection" line



etalux Capsule was founded in Italy in 1964 by Dino Ilario Dal Ri.A pioneer in global capsule manufacturing and with over 55 years of experience and knowledge, Metalux supplies high quality capsules to over 45 countries worldwide, making it one of the leading known capsule manufactures in the global packaging market. The main activity of the company is the production of Pvc

capsules, polylaminate capsules, sparkling wine capsules and Pet capsules, according to the latest technologies in the production processes. Recently, a range of innovative products has been created, which are closer to the requirement of respect to the environment and the disposal of packaging: these are heat-shrinking capsules, polylaminate capsules and champagne capsules which do not contain any trace of Pvc, hence known as Pvc Free

which are part of our "Green Collection" line. Metalux stands out for its ability to meet the new needs of each customer and for its ability to guarantee the best result. The company's strength lies in its continuous investment in technology and new equipment, and its philosophy is that 'a quality product knows no borders' *Info:* 

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## **TMCI PADOVAN** Tmci Padovan Joins Omnia Technologies



mnia Technologies, the leading platform in automation, bottling and packaging technologies for the wine&beverage industry, created by Investindustrial, further expands its range of solutions with the acquisition of the historical company Tmci Padovan. Today, Tmci Padovan has four production plants, 230 employees, and a turnover of approximately €65, achieved across 90 countries through its four divisions: Easybräu-Velo, specialising in industrial and craft beer production plants; Chemtech, active in manufacturing plants for gelatin, margarine, and food products; Padovan, focused on designing solutions for the wine sector; SAP-Blendtech, a division dedicated to designing machinery and plants for fruit juice and soft drink production;

and Ifbtech, dedicated to the diary segment and the production of healthy and plant-based drinks. Given its market presence and important synergies with Omnia Technologies' other brands and divisions, Tmci Padovan will be able to complete the Group's offering in the food and beverage industry and to further expand its overall presence in international markets."This acquisition is a fundamental step in our growth path" emphasises Andrea Stolfa, ceo of Omnia Technologies. " Tmci Padovan is a company with over 100 years' history and a unique portfolio of knowledge and clients. As a result, we will be able to strengthen Omnia Technologies' presence in the machinery for the food and beverage industry and to further expand our offering in the processing and bottling segments.

**Re-Calculate**. Crops drive the market, and the WBWE is probably the fair that is most affected by the annual ups and downs of the harvests in each hemisphere. However, regardless of snowfalls, mildew, or overproduction, it is in Amsterdam where producers, brokers and importers come to discuss prices and strategies in order to make the best decisions for their wines. No matter what has happened in the vineyard, the WBWE is the fair that will help you to improve your prices.

**Expand your network**. The WBWE is small in size but large in ambition, which means that here you will not waste your time or spend hours talking to dozens of people who have no interest in your wines. Here every conversation matters. We cannot guarantee that you will find your "partner for life," but you will make useful new contacts and perhaps new friends.

**Get inspired.** WBWE is a trade show for business, networking, learning and setting up business operations, but if there is one thing those who attend every year agree on, it is that you will find inspiration here to help you decide your next steps. Whether you are a producer, a broker, a logistics operator or a distributor, inspiration is what makes our business grow.

And finally, **we're talking about Amsterdam!** Possibly the best city in Europe to visit all year round, but especially vibrant in November.

If we have already persuaded you, please do write to us at *info@worldbulkwine.com* and we will help you organize your visit. You can also buy your ticket

here: www.worldbulkwine.com/visitantes/

Further information Cristina V. Miranda marketing@worldbulkwine.com www.worldbulkwine.com



Molte volte le idee nascono dai sogni, e a volte i sogni diventano realtà.

Noi ci siamo riusciti.

## SWNERDEAP<sup>M</sup>

## **DISTRIBUTORE CAPSULE A GESTIONE COMPLETAMENTE ELETTRONICA**

Grazie ad un innovativo progetto meccatronico (FEDS Technology), il nuovo distributore SYNCROCAP riesce ad adattarsi automaticamente alle diverse capsule da lavorare riducendo così i tempi di cambio formato fino all'80% e le imperfezioni dovute all'intervento umano.

Il nuovo sistema di distribuzione prevede un funzionamento meccatronico perfetto, dove meccanica ed elettronica sono progettate e fuse per creare una simbiosi unica: gestione, movimentazione e settaggio vengono gestiti e controllati da servo azionamenti in grado di autoregolarsi in funzione del tipo di capsula da lavorare.

Inoltre il nuovo sistema è assolutamente orientato al futuro poiché rappresenta un ulteriore passo in avanti nell'era della digitalizzazione industriale e un reale dispositivo utilizzabile in un sistema di lavoro con standard Industria 4.0.





## CHANGE THE RULES

## NOI SIAMO GIÀ NEL FUTURO... E TU?



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