

# **Yeast & Grape Pairing**

A MoreManual!™ by Shea A.J. Comfort www.MoreWine.com 1-800-823-0010

#### Introduction

This paper was created to help winemakers make the best, educated decision about choosing which strain(s) will best compliment their winemaking. The first section introduces and explores a few reasons for using different yeast during fermentation and shows how this approach can be applied to either single yeast batches or lots involving multiple strains. The second part of the paper is the actual listing of the pairings. Each varietal has a list of associated yeast chosen because they compliment specific characters in that grape. However, it is important to remember that these characteristics are general and that the same yeast strain used with the same varietal coming from two different vineyards will end up expressing slightly different qualities. In addition, that same strain, when used with two different types of grapes, can often wind-up producing different sets of flavors and aromas, as well. For example, a strain may produce berry flavors with Cabernet Sauvignon and more plum ones in Tempranillo. This is not always the case, but where it does happen, the descriptions on the list take this into account. In the end, only experimentation can guarantee success. Still, this pairing guide should be able to effectively narrow down the possibilities for you and get you further down the road to making the wine you want to make. So, with that in mind, let's examine what impact yeast choice can have in our winemaking.

#### **Yeast Strain selection**

# A Powerful Tool to Help Shape Your Wines!

Most winemakers know that great fruit makes great wine, but they often overlook the fact that very different styles of wine could have been made from that same fruit. An exceptional vineyard can produce wines that are light with an intense clarity of fresh fruit or wines that are darkly complex, spicy, and voluptuous. Both are great, just different. What is important to realize here is that each of these final wine styles is largely related to the choice of yeast used. Yeast has a tremendous impact on the final wine,, and understanding each strain's unique qualities will allow you to make the best choices needed to make your ideal wine.

Yet, many winemakers aren't clear about which strain(s) will help them create the wine they have in their mind's palette, so they usually just end up choosing a generally recommended strain and go with that after year. Now, this may be perfectly fine if you have always been happy with your wine up to that point. But what if, for example, each year, you find yourself wanting some spice and a bit more tannic intensity from your Syrah, and all you keep getting are general soft fruit characters. If you were only exposed to the one yeast you had been using up till now, you would never know that there were indeed other strains out there that could help to bring those missing qualities to your wine.

Research in the past twenty years has shown that wines made from the same must that was broken down and fermented in separate lots using different yeast strains still show persistent differences even after five years in the bottle. This means that the yeast choices you make now will directly shape that wine and make it unique throughout its lifetime. This is quite helpful to know because it shows that we have quite a bit of influence over how the wine will turn out, starting right from the very beginning of the fermentation itself. The only thing required on our part as winemakers are to understand the various options that the yeast can give us.

This is where learning from experience comes into play. The best scenario would be to be able to try all of the recommended yeast strains on a type of fruit we were already familiar with and judge for ourselves which yeast was best suited to producing the wine we had in mind. However, this may not always be practical. So, the next best thing would be to use the feedback of others who have had experience using these strains and use that as an educated starting point in developing our own yeast preferences. This is where MoreWine!'s yeast/grape pairing guide comes into play. The information found here was compiled from extensive industry research, client feedback, and our own in-house experience. Each recommendation represents a thorough overview of what is possible for each strain in the selected varietal and is a great place to start.

When using the chart, it is important to notice that out of all of the possible categories such as fruit quality, mouthfeel contribution, tannin/structural impact, floral and possible spice enhancement, some yeast do a few of these elements, and some do just one, but no single yeast does them all. So, what does that mean? Well, depending on whether you will use a single strain or a blend of yeast during the winemaking, this will affect which strain(s) may be the best choice to achieve the desired results.

# **Choosing a Single Strain**

If you are going to use a single strain, then it makes sense to choose a yeast that will deliver the most qualities possible for the style of wine you wish to make. However, when we start looking at the yeast selection charts, we can see that within a given category, more than one strain is known to give that particular characteristic. So, which of these is the best choice? Remember that even though they may share this one characteristic, the strains will differ in the other ways they impact a finished wine. So, care should be taken to choose which strain not only has the primary attribute you are looking for but the desirable secondary ones, as well.

For example, when making Syrah, the strain ICV-D254 emphasizes the fruit, and gives some spice but adds a lot to the mouthfeel of

the finished wine. Yet, if you wanted the classic violet floral tones that Syrah can often have, the ICV-D254 will not provide them. On the other hand, using the SYR yeast will give these floral notes and as a bonus, it will also emphasize the fruit qualities of the grape like the ICV-D254 does: But, even though the SYR has given you those violet, floral elements that you were seeking, it does not give the same elevated mouthfeel contribution that the ICV-D254 does. In the end, both are great choices for making high-quality Syrah, but in this particular scenario, it just comes down to choosing whether you want a big mouthfeel or violets.

# The Best of all World: Blending Multiple Strains!

Of course, the way to have your cake and eat it too is to use combinations of yeast and then blend them post fermentation. By approaching winemaking this way, you are allowing yourself full access to all potential combinations that could be used to create the wine you have in mind. You no longer have to choose which of the desired characteristics you can get by without, now, you can have them all. A good analogy for this is that when you start thinking about each strain being a blending component, it is like moving from the box of 12 crayons to the box of 64. You have now equipped yourself to create a much more versatile flavor and structure palette than was previously possible when you limited yourself to only using a single strain.

But, to best take advantage of all of this new potential, you will need to shift your thinking from "which yeast gives me the most of what I am looking for?" to "which combinations of yeast will give me all of the individual elements I will need to build my final wine?" Some yeasts are great stand-alone choices if using a single strain, and they do a good job at creating a wine that is generally pretty solid. The wines produced by these yeasts may not have everything we were hoping for by themselves, but they still manage to cover many bases, and make a good foundation that we as winemakers can build upon.

Now here is where the art of the blend comes into play. After the yeast for your 'foundation' has been decided upon, you need to determine which additional elements might be missing from your ideal wine. Is it body, spice notes, brighter fruit, or perhaps more complexity? Whatever it may be, now the focus needs to shift from choosing a generally balanced yeast to choosing individual yeast strains that will be able to bring the specific, desired qualities required to complete your blend.

Interestingly, with these new criteria in mind, you may find yourself choosing various yeast that may not necessarily be great single-strain selections. Some may be too simplistically fruity or predominantly heavy-handed and structural in their impact themselves. But, much like a little bit of salt and pepper can help to round out and lift the flavor and aroma of a freshly scrambled egg, those specific yeast can end up making the difference between a wine that is good and one that is great. It all comes down to learning how to create a balanced complexity in our wines, and learning how to use the unique qualities that each strain may have to offer is a large part of that process.

# **In Summary**

Whether you are using a single strain or already a convert to blending multiple lots, the information presented here will hopefully inspire you to spend a little more time thinking about your yeast selection. The yeast is a very powerful tool in creating whatever style of wine we are after, and the more we learn about what each of them can bring to the fermentation, the closer we get to creating our ideal wines. Yes, there are quite a few strains to choose from. While this may seem intimidating at first, it is quite empowering because it means that chances are a good match can be crafted for each of our tastes. We just have to take the time to find it. Ultimately, winemaking is a lifelong pursuit of knowledge and experience gained through fine-tuning a series of trials and errors. We get one shot each year at trying to better understand a very complex process; this is why it takes so much time to become very good at it. So, any time we can benefit from another winemaker's knowledge and experience, it gets us a little further down the path. This yeast/grape pairing chart is one example, and should give most winemakers a good starting point. Enjoy!

# Yeast and Grape Pairing Recommendations

Please note that full expression of the desired characteristics for any of the following strains is based on proper care and feeding of the yeasts, along with using sound, quality fruit, and good winemaking practices. In addition, MoreWine! strongly recommends using a hydration and nutrient set from CellarScience or Lallemand. CellarScience FermStart or Lallemand Go-Ferm for hydration along with CellarScience FermFed and FermFed DAP Free or Fermaid K and Fermaid O from Lallemand for feeding at the start of fermentation and then often again after ½ sugar depletion. As always, temperature management throughout the entire fermentation is important to get the typical yeast flavors we list here.

For more information on fermentation, please consult MoreWine's Red or White winemaking Manuals.

Finally, in addition to sensory impact, each yeast will have known temperature tolerances, nutrient needs, and fermentation rates, which should also be considered before making a selection. Complete information for each strain can be found on our website: <a href="https://www.morewinemaking.com">www.morewinemaking.com</a>.

# **Yeast & Grape Pairing Suggestions**

These next four sections will list a few recommended yeast strains for each common grape type (classic Vinifera varietals will be listed first, followed by French/American Hybrids and Labrusca). When looking over these yeast & grape pairings, remember that these suggestions are not set in stone! They are only provided as an aid in helping you choose which strain(s) will help bring out the specific qualities you are shooting for in your wines. However, if you feel like being adventurous and want to try another strain (or combination of strains) not listed here, by all means, do so. Don't be afraid to experiment- you may discover something great!

# **REDS** (Vinifera)

#### **Cabernet Franc**

- **BIG RED:** CellarScience™. An ideal choice for making big, structured, full-bodied Cab Franc.. Very efficient at breaking down and extracting tannins and anthocyanins from grape skin walls, making wines with dark inky color and a tannin profile suitable for extended aging. Big mouthfeel due to polysaccharide and glycerol production. High alcohol capacity. Feed this strain FermFed as it has a higher nutrient need.
- MT: Lallemand<sup>™</sup>. Ability to enhance varietal fruit and floral aromas. In Cab Franc MT emphasizes berry, strawberry jam, caramel, and some spice notes. Good color stability, along with enhanced tannic structure and rich mouthfeel. Great by itself or as part of a blend.
- BDX: Lallemand™. Good all-around choice for berry, plum, and jam in the Classic Bordeaux profile. Moderate rate fermenter with good color retention. Useful for developing structure in the wine by reinforcing existing tannins both good and bad, so don't use with unripe fruit.
- **BM45:** Lallemand™. Big mouthfeel, strong plum, cherry liquor notes, rose petal, jam, and some berry. Classically Italian in style. Good color stability and helps to minimize vegetative characters.
- ICV-D21: Lallemand™. Fresh berry fruit along with a big mouthfeel and positive tannic structure. Maintains good acidity and inhibits herbaceous characters from developing. Useful for hot climate fruit (high pH) and in blends for maintaining a lively freshness.
- ICV-D254: Lallemand<sup>™</sup>. Big mouthfeel and rounding of tannins. Intense fruit: more dried than fresh with a focus on plum. Helps with color stability and is useful for adding body to blends.
- ICV-D80: Lallemand<sup>™</sup>. Big volume and fine grain tannin, with plum and spice in Cabernet Franc. Great for bringing more positive tannin intensity to a blend.
- ICV-GRE: Lallemand™. Brings fresh, berry fruit foreword along with good mouthfeel. Useful for adding fresh fruit to a blend. Effective for reducing herbaceous and vegetal notes in under-ripe fruit.
- RC212: Lallemand<sup>™</sup>. Contributes to structure with ripe berry, bright fruit and spice. Good color stability and great for adding complex fruit to a blend.
- **RP15 (VQ15):** *Lallemand* <sup>™</sup>. Useful for adding spice and color stability to a blend.

# **Cabernet Sauvignon**

 BIG RED: CellarScience™. An ideal choice for making big, structured, full-bodied Cabs. Very efficient at breaking down and extracting tannins and anthocyanins from grape skin walls, making wines with dark inky color and a tannin profile suitable for extended aging. Big mouthfeel due to

- polysaccharide and glycerol production. High alcohol capacity makes it a great choice for cab grapes that need to hang on the vine for phenolic ripeness. Also has a high nutrient need, so not the best choice for a first-time winemaker.
- RED: CellarScience<sup>™</sup>. An easy strain to work with. Ferments clean at higher temperatures. Produces low amounts of SO2, making ML easier. Makes Cabs that are more approachable early. Great red berry flavors.
- MT: Lallemand™. Ability to enhance varietal fruit and floral aromas, along with strawberry jam, caramel, and spice notes. Good color stability, along with enhanced tannic structure and rich mouthfeel. Great by itself or as part of a blend.
- **BM45:** Lallemand<sup>™</sup>. Big mouthfeel, notes of cherry liquor, rose petal, jam, plum, and berry, along with earthy and spicy elements. Classically Italian in style. Good color stability and helps to minimize vegetative characters.
- BDX: Lallemand™. Good all-around choice for berry, plum, and jam in the Classic Bordeaux profile. Moderate rate fermenter with good color retention. Useful for developing structure in the wine by reinforcing existing tannins- both good and bad, so don't use with unripe fruit.
- ICV-D21: Lallemand™. Fresh berry fruit along with a big mouthfeel and positive tannic structure. Maintains good acidity and inhibits herbaceous characters from developing. Useful for hot climate fruit (high pH) and in blends for maintaining a lively freshness.
- **RP15 (VQ15):** *Lallemand*<sup>™</sup>. Emphasizes the berry aspects of the fruit, along with delivering color stability, increased mouthfeel, and agreeable tannins.
- ICV-D254: Lallemand<sup>™</sup>. Big mouthfeel and rounding of tannins. Intense fruit: more dried than fresh with a focus on berry and jam characters. It helps with color stability and is useful for adding body to blends.
- ICV-D80: Lallemand<sup>™</sup>. Big volume and fine grain tannin.
   Great for bringing more positive tannin intensity to a blend.
- ICV-GRE: Lallemand™. Brings fresh, berry fruit foreword along with good mouthfeel. Useful for adding fresh fruit to a blend. Effective for reducing herbaceous and vegetal notes in under-ripe fruit.

#### Grenache

- PURPLE: CellarScience™. Induces ripe cherries, raspberries, red currant, figs, and jam flavors. Due to its production of glycerol and release of mannoproteins, it produces full-bodied, rich red wines. PURPLE has a very low production of SO2, which is favorable for an easy malolactic fermentation (MLF) post-fermentation. An easy-to-ferment yeast with a low nutrient need makes it an easy fermentation partner. It also has a "killer" quality and naturally inhibits unwanted bacterial or wild yeast growth during fermentation.
- ICV-GRE: Lallemand™. Strong berry, fresh fruit characters, and some spices are present in the fruit. Enhances foremouth impact.

- **SYR:** Lallemand<sup>™</sup>. Berry and spice, along with an enhanced mouthfeel, is nicely brought out by SYR in Grenache.
- MT: Lallemand™. Soft berry notes along with color stability and enhanced mouthfeel.
- RP15 (VQ15): Lallemand™. Rich berry characters, along with mineral notes. Enhances mouthfeel to make a lush wine.
- ICV-D254: Lallemand<sup>™</sup>. Concentrated fruit with a focus on soft plum in Grenache. Great mouthfeel enhancement. Good for adding body to a blend.
- ICV-D80: Lallemand™. Plum, spice, and structure. Great as a blending component.
- **BDX:** Lallemand<sup>™</sup>. Plum characters developed, in addition to color stability and tannic structure reinforcement. Useful as a blending component.
- **BM45:** Lallemand → Jammy plum, with some earthy spice. Big mouthfeel contribution along with good color stability.

#### **Merlot**

- **RED:** CellarScience. Emphasizes fruit, particularly red berry flavors. Good color. It makes balanced wines that do not require extended aging. Because RED ferments cleaner than most yeast at high temperatures, it is the perfect choice if you are fermenting in a warm environment and do not have temperature control. It does not produce much SO2, so it is a great choice for easier ML fermentations. Average nitrogen requirements.
- **BIG RED:** CellarScience™. Use for Merlots when you want to make a complex version with as much structure and deep color as possible. This strain is very efficient at breaking down and extracting tannins and anthocyanins from grape skin walls, making wines with dark inky color and a tannin profile suitable for extended aging. Big mouthfeel due to polysaccharide and glycerol production. High alcohol capacity makes it a great choice for high brix grapes. It also has a high nutrient need, so not the best choice for a first-time winemaker.
- MT: Lallemand<sup>™</sup>. Ability to enhance varietal fruit and floral aromas. In Merlot, MT emphasizes berry, strawberry jam, caramel, and some spice notes. Good color stability, along with enhanced tannic structure and rich mouthfeel. Great by itself or as part of a blend.
- **BM45:** Lallemand<sup>™</sup>. Big mouthfeel, strong plum along with notes of cherry liquor, rose petal, jam, and some berry. Classically Italian in style. Good color stability as well as helps to minimize vegetative characters.
- BDX: Lallemand. A good all-around choice for berry, plum, and jam in the Classic Bordeaux profile. It can often bring out spice notes if in the fruit. Moderate rate fermenter with good color retention. Useful for developing structure in the wine by reinforcing existing tannins- both good and bad, so don't use unripe fruit.
- RP15 (VQ15): Lallemand™. Emphasizes the berry aspects of

- the fruit, often along with some spice in Merlot. In addition, color stability increased mouthfeel, and agreeable tannins are also contributed.
- ICV-D21: Lallemand™. Fresh berry fruit along with a big mouthfeel and positive tannic structure. Maintains good acidity and inhibits herbaceous characters from developing. Useful for hot climate fruit (high pH) and in blends for maintaining a lively freshness.
- ICV-D254: Lallemand<sup>™</sup>. Big mouthfeel and rounding of tannins. Intense fruit: more dried than fresh with a focus on plum characters in Merlot. Helps with color stability and is useful for adding body to blends.
- ICV-D80: Lallemand™. Big volume and fine grain tannin, with plum and spice in Merlot. Great for bringing more positive tannin intensity to a blend.
- ICV-GRE: Lallemand™. Brings fresh, berry fruit foreword along with good mouthfeel. Useful for adding fresh fruit to a blend. Effective for reducing herbaceous and vegetal notes in under-ripe fruit.

#### **Nebbiolo**

- **BIG RED:** CellarScience™. Nice choice for making Nebbiolo. Very efficient at breaking down and extracting tannins and anthocyanins from grape skin walls, making Nebbiolo with a darker color and a tannin profile suitable for extended aging. Nice mouthfeel due to polysaccharide and glycerol production. The nutrient need is higher so feed with FermFed.
- **SYR:** Lallemand<sup>™</sup>. Côtes du Rhône isolate usually for classic Syrah aromas: however, when used in a Nebbiolo, it nicely emphasizes berry and licorice.
- ICV-D80: Lallemand™. Big volume and fine grain tannin, with spice and licorice in a Nebbiolo. Great for color stability and for bringing more positive tannin intensity to a blend.
- RP15 (VQ15): Lallemand<sup>™</sup>. Emphasizes the berry aspects
  of the fruit, along with licorice notes. In addition, color
  stability, increased mouthfeel and agreeable tannins are also
  contributed.
- ICV-D21: Lallemand<sup>™</sup>. Plum jam is emphasized, along with a big mouthfeel and positive tannic structure. Maintains good acidity and inhibits herbaceous characters from developing.
- BM45: Big mouthfeel, plum jam, along with earthy and spicy elements. Good color stability and helps to minimize vegetative characters.
- AMH: Lallemand<sup>™</sup>. Enhances clove and nutmeg spicy elements, along with cherry notes in a Nebbiolo. Complex with good red fruit flavors and aromas.

#### **Pinot Noir**

• **RED:** CellarScience. Emphasizes red berry fruit in Pinot. Good color extractor. Ferments cleaner than most yeast at high temperatures, making it the perfect choice if you are fermenting in a warm environment and do not have temperature control. It does not produce much SO2, so it is

- a great choice for easier ML fermentations. Average consumer of nitrogen.
- **AMH:** Lallemand<sup>™</sup>. Enhances clove and nutmeg spicy elements, complex with good red fruit flavors and aromas. Color friendly, some mouthfeel and structure, as well.
- **RC212:** *Lallemand* <sup>™</sup>. Ripe berry, bright fruit and spice. More structure than mouthfeel, with good color retention.
- **BM45:** Lallemand™. Big mouthfeel and jam, along with some earthy and spicy elements. Good color stability and helps to minimize vegetative characters.
- RP15 (VQ15): Lallemand™. Emphasizes red fruit, along with spice. In addition, color stability, increased mouthfeel, and agreeable tannins are also contributed.
- ICV-GRE: Lallemand™. Brings fresh red fruit foreword along with good mouthfeel. Also effective for reducing herbaceous and vegetal notes in under-ripe fruit. Useful as a blending component.
- W15: Lallemand<sup>™</sup>. Normally for German whites, when used in a Pinot W15 will give bright fruit focusing on berry notes and contribute mouthfeel.

#### Sangiovese

- **RED:** CellarScience™. Good color extractor. Subtle red berry flavors. Ferments are cleaner than most yeast at high temperatures, making it the perfect choice if you are fermenting in a warm environment and do not have temperature control. Easier for ML because of low sulfur production. Average consumer of nitrogen.
- **BM45**: *Lallemand* \*. One of the best all-around choices for Sangiovese. With big mouthfeel, plum, fruit jam, rose, cherry liquor, and earthy and spicy notes. Good color stability helps to minimize vegetative characters.
- MT: Lallemand<sup>™</sup>. Color intensity, tannic structure, and midpalate enhancement are stressed, along with berry, red fruits, and floral notes emphasized in a Sangiovese.
- **SYR:** Lallemand™. Côtes du Rhône isolate is usually for classic Syrah aromas: however, when used in a Sangiovese, it nicely emphasizes the berry, plum, and floral aspects.
- ICV-D254: Lallemand<sup>™</sup>. Big mouthfeel and rounding of tannins. Intense fruit: more dried than fresh, emphasizing plum in Sangiovese. Helps with color stability and is useful for adding body to blends.
- ICV-D21: Lallemand™. Fresh berry fruit along with a big mouthfeel and positive tannic structure. Maintains good acidity and inhibits herbaceous characters from developing. Useful for hot climate fruit (high pH) and in blends for maintaining a lively freshness.
- ICV-D80: Lallemand<sup>™</sup>. Big volume and fine grain tannin, floral notes in a Sangiovese. Great for bringing more positive tannin intensity to a blend.
- AMH: Lallemand™. Enhances clove and nutmeg spicy elements, along with berry in a Sangiovese. Complex with

- good berry flavors and aromas.
- ICV-GRE: Lallemand. Brings fresh, red berry fruit foreword along with good mouthfeel. Also effective for reducing herbaceous and vegetal notes in under-ripe fruit.

## Syrah / Petit Syrah

- **PURPLE:** CellarScience™. Classic Rhône yeast. Induces flavors of ripe cherries, raspberries, red currant, figs, and jam. Due to its production of glycerol and release of mannoproteins, it produces full-bodied, rich red wines. PURPLE has a very low production of SO2, which is favorable for an easy malolactic fermentation (MLF) post-fermentation. An easy to ferment yeast with a low nutrient need makes it an easy fermentation partner. It also has a "killer" quality and naturally inhibits unwanted bacterial or wild yeast growth during fermentation.
- **SYR:** Lallemand<sup>™</sup>. Côtes du Rhône isolate for classic Syrah aromas: violets, raspberries, cassis, strawberries, black pepper, and grilled meat.
- BM45: Lallemand™. Big mouthfeel emphasizes the fruit and structure along with some earthy and spicy elements. Good color stability helps to minimize vegetative characters.
- ICV-D254: Lallemand<sup>™</sup>. Big mouthfeel and rounding of tannins. Intense fruit: more dried than fresh, along with a nice spice quality if present in the fruit. Helps with color stability and is useful for adding body to blends.
- **RP15 (VQ15):** Lallemand<sup>™</sup>. Emphasizes the fruit, along with spice and black pepper notes. In addition, color stability, increased mouthfeel, and agreeable tannins are also contributed.
- ICV-D80: Lallemand<sup>™</sup>. Big volume and fine grain tannin, smoke, and licorice, along with spice and pepper notes. Great for bringing more positive tannin intensity to a blend.
- AMH: Lallemand<sup>™</sup>. Enhances clove and nutmeg spicy elements, complex with good fruit flavors and aromas. Some mouthfeel and structure, as well.
- ICV-GRE: Lallemand™. Brings fresh fruit forward along with spice and violet aromas. Good mouthfeel enhancement, as well. Effective for reducing herbaceous and vegetal notes in under-ripe fruit.
- **BDX:** Lallemand<sup>™</sup>. A good all-around choice for berry and jam. Will also bring out some of the leather and spice elements if they are in the fruit. Moderate rate fermenter with good color retention. Useful for developing structure in the wine by reinforcing existing tannins- both good and bad, so don't use with unripe fruit.
- ICV-D21: Lallemand<sup>™</sup>. Fresh berry fruit along with a big mouthfeel and positive tannic structure. Maintains good acidity and inhibits herbaceous characters from developing. Useful for hot climate fruit (high pH) and in blends for maintaining a lively freshness.

#### **Tempranillo**

- **RED:** CellarScience™. Emphasizes fruit, particularly red berry flavors. Good color. Makes balanced wines that do not require extended aging. Because RED ferments cleaner than most yeast at high temperatures, it is the perfect choice if you are fermenting in a warm environment and do not have temperature control. It does not produce much SO2 so it is a great choice for easier ML fermentations. Average nitrogen requirements.
- **BIG RED:** CellarScience™. Use for Tempranillo when you are looking for more structure and color. This strain is very efficient at breaking down and extracting tannins and anthocyanins from grape skin walls, making wines with dark inky color and a tannin profile suitable for extended aging. Big mouthfeel due to polysaccharide and glycerol production. High alcohol capacity, so it's a great choice for high brix grapes. Higher nutrient needs.
- MT: Lallemand™. Good choice for berry, red fruits, floral notes, and mid-palate enhancement. Nice by itself, or as a blending foundation.
- **SYR:** Lallemand™. Côtes du Rhône isolate is usually for classic Syrah aromas: however, when used in a Tempranillo, it nicely emphasizes the berry, plum, and floral aspects. Nice by itself, or as fruit and top notes in a blend.
- RP15 (VQ15): Lallemand™. Emphasizes the fruit's berry aspects and mid-palette enhancement in Tempranillo. Color stability, increased mouthfeel, and agreeable tannins are also contributed.
- **BDX:** Lallemand. Good all-around choice for berry and jam. Moderate rate fermenter with good color retention. Useful for developing structure in Tempranillo by reinforcing existing tannins- both good and bad, so don't use with unripe fruit.
- ICV-D254: Lallemand<sup>™</sup>. Big mouthfeel and rounding of tannins. Intense fruit: more dried than fresh, emphasizing plum in Tempranillo. Helps with color stability and is useful for adding body to blends.
- BM45: Lallemand<sup>™</sup>. Big mouthfeel and plum are brought out in Tempranillo by BM45. Good color stability helps to minimize vegetative characters.
- ICV-GRE: Lallemand™. Brings fresh, red berry fruit foreword along with floral notes. Good mouthfeel. Also effective for reducing herbaceous and vegetal notes in under-ripe fruit.
- ICV-D21: Lallemand™. Fresh berry fruit along with a big mouthfeel and positive tannic structure. Maintains good acidity and inhibits herbaceous characters from developing. Useful for hot climate fruit (high pH) and in blends for maintaining a lively freshness.
- ICV-D80: Lallemand<sup>™</sup>. Big volume and fine grain tannin, along with floral tones in a Tempranillo. A good tool for bringing more positive tannin intensity to a blend.

#### **Zinfandel / Primitivo**

- **RED:** CellarScience. A great choice for fruit-forward, juicy Zins. It makes balanced wines that do not require extended aging with smooth tanning profiles. Ferments are cleaner than most yeast at high temperatures, so it is the perfect choice if you are fermenting in a warm environment and do not have temperature control. It does not produce much SO2, so it is a great choice for easier ML fermentations. Average nitrogen requirements.
- PURPLE: CellarScience™. A great choice for complex Zins.
   Emphasizes ripe cherries, raspberries, red currant, and figs.
   Rich mouthfeel due to production of glycerol and release of mannoproteins. Low production of SO2, which is favorable for an easy MLF fermentation. Easy to ferment yeast with a low nutrient need. It also has a "killer" quality and naturally inhibits unwanted bacterial or wild yeast growth during fermentation.
- BM45: Lallemand™. Good all-around choice with a big mouthfeel, jam, plum, and berry, along with earthy and spicy elements. Good color stability and helps to minimize vegetative characters.
- RP15 (VQ15): Lallemand<sup>™</sup>. Emphasizes the berry aspects along with mineral and spice elements in Zin. Color stability, increased mouthfeel, and agreeable tannins are also contributed. Higher alcohol tolerance may also be helpful in making certain styles.
- **ICV-D80:** Lallemand<sup>™</sup>. Big volume and fine grain tannin, mineral, black pepper, and spice in a Zin. Great for bringing more positive tannin intensity to a blend.
- AMH: Lallemand<sup>™</sup>. Enhances "clove" and "nutmeg" spicy elements and minerality in a Zin. Complex with good berry flavors and aromas.
- **BDX:** Lallemand. Good all-around choice for berry and jam notes. If there is some spice in the fruit, BDX will help bring it out. Moderate rate fermenter with good color retention. Useful for developing structure in the wine by reinforcing existing tannins- both good and bad, so don't use with unripe fruit.
- ICV-D254: Lallemand<sup>™</sup>. Big mouthfeel and rounding of tannins. Intense fruit: more dried than fresh, emphasizing plum and berry. It helps with color stability and is useful for adding body to blends.
- **SYR:** Lallemand<sup>™</sup>. Côtes du Rhône isolate is usually for classic Syrah aromas: however, when used in a Zin emphasizes the berry and plum aspects.
- ICV-D21: Lallemand<sup>™</sup>. Fresh berry fruit along with a big mouthfeel and positive tannic structure. Maintains good acidity and inhibits herbaceous characters from developing. Useful for hot climate fruit (high pH) and in blends for maintaining a lively freshness.

# WHITES (Vinifera):

#### Chardonnay

- **LUSCIOUS:** CellarScience. The name says it all. Creamy mouthfeel and deep complexity. Ferment it cooler and emphasize the creaminess and the toasted champagne-like complexity of sur lie aging. Or crank it up a bit warmer and add in some more tropical notes. After fermentation, this yeast naturally goes nuclear, implodes, and breaks open its cell walls. Polysaccharides such as mannoproteins are released into the wine. Being a low producer of SO2, it is naturally a great candidate for later malo-lactic fermentations.
- FLORAL: CellarScience™. A great choice for Chardonnay when you seek fresh fruit and floral flavor and aromas. A hybrid between Cerevisiae and Bayanus. Produces a wide range of flavors to add depth and complexity. Cannot assimilate sulfur which greatly reduces H2S. Low H2S and low volatile acidity are part of the secret to emphasizing fresh fruit flavors. The production of phenylethyl alcohol and its derivative β-phenylethyl adds sweet floral notes. Phenylethyl alcohol also helps extract thiols due to their similar polarity, contributing even more to citrus and floral flavors. A hugely aromatic yeast that is easy to ferment.
- CITRUS: CellarScience. This is a first choice for Sauvignon Blanc as it is a thiol liberator. However, can be a good choice for fruit-forward Chardonnays as this strain is good at preserving acidity. So if you are working with Chardonnay from a warmer region, Citrus can be particularly helpful.
- ICV-D47: Lallemand\*\*. Complex white with citrus, dried apricot, pineapple, and floral notes. Lees contact gives ripe spicy aromas with tropical and citrus tones, along with nuts. Adds volume/mouthfeel. Barrel fermentation and lees aging are recommended. Good single-strain or as a blending component.
- T306: Lallemand<sup>™</sup>. Exotic fruit and pineapple, with elegant white fruit notes in Chardonnay. Contributes to mouthfeel and lees aging is recommended. Good as a single strain or as a blending component.
- **CY3079:** Lallemand<sup>™</sup>. Classic white burgundy: rich, full mouthfeel with aromas of fresh butter, almonds, honey, white fruit, flowers, and pineapple. Barrel fermentation and lees aging are recommended.
- **QA23:** Lallemand™. Usually used in terpenic whites, it enhances a grape's floral, aromatic aspects. In Chardonnay, floral, white peaches are emphasized with equal clarity in both aroma and taste. Great as a "top-note" in a blend.
- **BA11:** Lallemand. Fresh fruit aromas of orange blossom, pineapple, and apricot develop, along with clean aromatics, lingering flavors, and an intensified mouthfeel.
- Rhône 4600: Lallemand<sup>™</sup>. Apricot and tropical fruit with enhanced mouthfeel contribution. Delivers fat roundness and balance along with light esters. Good as a blending component.

- ICV-D254: Lallemand™. Usually used as a blending component, D254 gives stone fruit flavors, aromas of nuts, smoke, and sourdough, along with a creamy mouthfeel. Good for adding complexity and mouthfeel to a blend.
- ICV-GRE: Lallemand. Brings fresh melon foreword along with good mouthfeel. Also effective for reducing herbaceous and vegetal notes in under-ripe fruit.

#### Gewürztraminer

- **FLORAL:** *CellarScience* \*\*. Releases floral, rose, citrus, and stone fruit aromatics that are bound up in Gewürztraminer. Known for its production of β-glucosidase, which liberates aromatic compounds by cleaving terpenes from the sugars that bind them. Due to such a rapid period of growth, the yeast cells require higher levels of nutrients to ensure a healthy fermentation. Additional FermFed nutrient is recommended at the start of fermentation due to the short lag phase of this strain. POF negative, so can't produce phenolic off-flavors.
- QA23: Lallemand™. Often used in terpenic whites, it enhances the aromatic aspects of a grape. In Gewürztraminer, QA23 focuses on citrus and spice notes and makes an elegant, fruit-focused, floral, and aromatic wine.
- W15: Lallemand™. Swiss isolate is used to create white wines with a focus on intense, bright fruit and a heavy mouthfeel that gracefully stands up to long-term aging. In Gewürztraminer, spice, rose, and citrus notes are nicely emphasized. Good as a single strain or as a blending component.
- ICV-D47: Lallemand\*\*. Elements of flint stone/mineral, along with rose are brought out by D47 in a Gewürtztraminer. Lees contact gives rise to ripe spicy aromas with tropical and citrus tones developing. Adds volume/mouthfeel.
- BA11: Lallemand<sup>™</sup>. In Gewürztraminer, rose and flint stone/ mineral elements are developed, along with clean aromatics, lingering flavors, and an intensified mouthfeel.
- **R2:** Lallemand. Sauternes isolate is used for the expression of spice and flint stone/mineral notes in an intense, direct fruit-style Gewürztraminer.
- ICV-GRE: Lallemand. Brings fresh citrus tones foreword along with flint stone/mineral. Good mouthfeel. Useful for reducing herbaceous and vegetal notes in under-ripe fruit.

#### Muscat

- **BOUQUET:** *CellarScience* Releases floral, rose, citrus, and stone fruit aromatics that are bound up in Muscat skins. Big β-glucosidase producer, which liberates aromatic compounds by cleaving terpenes from the sugars that bind them. Fast fermenter that requires higher levels of nutrients to ensure a healthy fermentation. POF (phenolic off flavors) is negative so can't produce volatile phenolic off-flavors.
- **R2:** Lallemand<sup>™</sup>. Sauternes isolate is well suited for creating floral, intense, direct fruit-style wines, such as Muscat.
- QA23: Lallemand<sup>™</sup>. Often used in terpenic whites, it enhances the aromatic aspects of a grape. In Muscat,

- QA23 brings out the floral notes and makes an elegant, fruit-focused, aromatic wine.
- W15: Lallemand<sup>™</sup>. Swiss isolate is used to create white wines with a focus on intense, bright fruit and a heavy mouthfeel that gracefully stands up to long-term aging.
- ICV-GRE: Lallemand. In Muscat, GRE will create a wine
  with intense fruit and a big mouthfeel. Useful for reducing
  herbaceous and vegetal notes in under-ripe fruit, as well.
- BA11: Lallemand<sup>™</sup>. Floral with soft apricot notes, along with good mouthfeel contribution. Good for blends.
- ICV-D47: Lallemand™. Lees contact gives rise to ripe spicy aromas with tropical and citrus tones. Good as a blending component. Adds volume/mouthfeel.

## **Pinot Gris/Grigio**

- FLORAL: CellarScience. A first choice for Pinot Gris/Grigio. A hybrid between Cerevisiae and Bayanus. Produces a wide range of flavors to add depth and complexity. It cannot assimilate sulfur which greatly reduces H2S. Low H2S and volatile acidity are part of the secret to emphasizing fresh fruit flavors. The production of phenylethyl alcohol and its derivative β-phenylethyl adds sweet floral notes. Phenylethyl alcohol also helps extract thiols due to their similar polarity, contributing even more to citrus and floral flavors. A hugely aromatic yeast that is easy to ferment.
- **BA11:** Lallemand<sup>™</sup>. In Pinot Gris, floral, peach, apricot, and tropical fruit elements are developed, along with clean aromatics, lingering flavors, and an intensified mouthfeel. Good single-strain choice.
- QA23: Lallemand<sup>™</sup>. Usually used in terpenic whites, it enhances the aromatic aspects of a grape. In Pinot Gris, QA23 focuses on floral and peach/apricot notes. It makes an elegant, fruit-focused, floral, and aromatic wine.
- Rhône Lallemand™. 4600: Peach, apricot, and tropical fruit with enhanced mouthfeel contribution. Delivers fat roundness and balance along with light esters. Good either as a single strain or as a blending component.
- ICV-D47: Lallemand™. D47 brings out tropical fruit, along with a rich mouthfeel in a Pinot Gris. Lees contact gives rise to ripe spicy aromas with tropical and citrus tones developing. Adds volume/mouthfeel. Lees aging recommended. Good single-strain or as a blending component.
- ICV-GRE: Lallemand. Brings fresh pear and melon tones foreword along with good mouthfeel. Useful for reducing herbaceous and vegetal notes in under-ripe fruit.
- **R2:** Lallemand<sup>™</sup>. Sauternes isolate is used in a Pinot Gris for the expression of tropical fruit notes in an intense, direct fruit-style wine.
- ICV-D254: Lallemand™. As a blending component, D254 gives stone fruit flavors, aromas of nuts, smoke, and sourdough, along with a creamy mouthfeel. Good for adding complexity and mouthfeel.

• **CY3079:** Lallemand<sup>™</sup>. Classic white burgundy: rich, full mouthfeel with aromas of fresh butter, almonds, honey, white fruit, flowers, and pineapple. Barrel fermentation and lees aging are recommended. Good for adding complexity and mouthfeel to a blend.

#### Riesling

- **BOUQUET:** CellarScience. Floral, rose, citrus, and stone fruit aromatics. Big ß-glucosidase producer liberates aromatic compounds by cleaving terpenes from the sugars that bind them. Fast fermenter that requires higher levels of nutrients to ensure a healthy fermentation. POF (phenolic off flavors) is negative, so it can't produce volatile phenolic off flavors.
- **BA11:** Lallemand<sup>™</sup>. In Riesling, floral and tropical fruit elements are developed, along with clean aromatics, lingering flavors, and an intensified mouthfeel.
- W15: Lallemand™. Swiss isolate is used to create white wines with a focus on intense, bright fruit and a heavy mouthfeel that gracefully stands up to long-term aging. In Riesling, floral and citrus notes are emphasized. Good as a single strain or as a blending component.
- QA23: Lallemand<sup>™</sup>. Usually used in terpenic whites, it enhances the aromatic aspects of a grape. In Riesling, QA23 focuses on citrus notes and makes an elegant, fruitfocused, floral, and aromatic wine.
- ICV-D47: Lallemand<sup>™</sup>. Elements of apple rose, and peach is brought out by D47 in a Riesling. Lees contact gives rise to ripe spicy aromas with tropical and citrus tones developing. Adds volume/mouthfeel.
- **T306:** Lallemand™. Rose and peach notes are nicely emphasized. It contributes to mouthfeel and is a good blending component.
- R2: Lallemand™. Sauternes isolate is used for the expression of tropical/passion fruit notes in an intense, direct fruit-style Riesling.
- R-HST: Lallemand™. Austrian isolate retains fresh varietal character while contributing body and mouthfeel; rose and peach characteristics are accentuated. Used to produce a crisp, leaner-styled Riesling capable of showing minerality intended for aging.
- ICV-GRE: Lallemand™. Brings fresh tropical fruit tones foreword along with good mouthfeel. Also effective for reducing herbaceous and vegetal notes in under-ripe Fruit.

#### Roussanne

• **BOUQUET:** CellarScience™. Floral, rose, citrus, and stone fruit aromatics. Big ß-glucosidase producer liberates aromatic compounds by cleaving terpenes from the sugars that bind them. Fast fermenter that requires higher levels of nutrients to ensure a healthy fermentation. POF (phenolic off flavors) is negative, so it can't produce volatile phenolic off flavors.

- W15: Lallemand<sup>™</sup>. Swiss isolate is used to create white wines with a focus on intense, bright fruit and a heavy mouthfeel that gracefully stands up to long-term aging. In Roussanne, elements of mineral, spice, citrus zest, and floral notes are Emphasized. Good single-strain choice.
- **VL3:** Lallemand™. Mineral, spice, and citrus zest are all enhanced by VL3 in Roussanne. Good single-strain choice or as a blending component.
- **BA11:** Lallemand<sup>™</sup>. n Roussanne, floral elements are developed, along with clean aromatics, lingering flavors, and an intensified mouthfeel.
- ICV-D47: Lallemand. Elements of spice, as well as an increase in volume, are brought out by D47 in Roussanne. Lees contact gives rise to ripe spicy aromas with citrus tones developing. Good for adding spice to a blend. Lees aging recommended.
- QA23: Lallemand™. Usually used in terpenic whites, it enhances the aromatic aspects of a grape. In Roussanne, QA23 focuses on citrus zest notes and makes an elegant, fruit-focused, floral, and aromatic wine.
- ICV-D21: Lallemand™. Floral and citrus zest notes are emphasized, along with increased volume. Maintains good acidity.
- **ICV-D254:** *Lallemand* <sup>™</sup>. Contributes mineral, spice, and volume to a Roussanne. Good as a blending component.

## **Sauvignon Blanc**

- CITRUS: CellarScience™. Cleaving thiols is what CITRUS does, releasing the classic citrus, lime, passionfruit, and floral flavors that help separate Sauvignon Blanc from more ordinary white table wine. Can ferment at cooler temperatures, but the enzymatic cleaving activity is highest at around 56–60°F. Zesty Grapefruit, lime, lemon peel, floral, and passionfruit flavors. This yeast is good at preserving acidity,, so working with whites from a warmer region can be particularly helpful.
- VL3: Lallemand<sup>™</sup>. Enhances the classic Sauvignon Blanc characteristics, including citrus zest, lemon grass, and lime leaf. Very French in style, with complexity and not just fruit being emphasized. Good single-strain choice or as a blending component.
- QA23: Lallemand<sup>™</sup>. Usually used in terpenic whites, it enhances the aromatic aspects of a grape. In Sauvignon Blanc, QA23 focuses on citrus notes and makes an elegant, fruit-focused, floral, and aromatic wine.
- ICV-D47: Lallemand™. Complex white with citrus and floral notes. Lees contact gives ripe spicy aromas with tropical and citrus tones developing. Adds volume/mouthfeel. Barrel fermentation and lees aging are recommended. Good single-strain or as a blending component.
- T306: Lallemand<sup>™</sup>. Exotic fruit and pineapple, with elegant tropical notes in Sauvignon Blanc. Contributes to mouthfeel and lees aging is recommended. Good as a blending

- component.
- BA11: Lallemand™. In Sauvignon Blanc, fresh fruit aromas of citrus, pear/melon, tropical fruit, and some spice develop, along with clean aromatics, lingering flavors, and an intensified mouthfeel.
- **R2:** Lallemand. Sauternes isolate is used for the expression of Sauvignon Blanc aromas, tropical/passion fruit notes in an intense, direct fruit-style wine.
- ICV-K1: Lallemand™. Creates a light, crisp, fresh wine that will bring out the grassy/asparagus qualities of a Sauvignon Blanc
- **W15:** Lallemand<sup>™</sup>. Swiss isolate is used to create white wines with a focus on intense, bright fruit and a heavy mouthfeel that gracefully stands up to long-term aging.
- Rhône 4600: Lallemand™. Tropical fruit with enhanced mouthfeel contribution. It does not enhance varietal characteristics but does contribute fat roundness and balance along with light esters. Good as a blending component.
- ICV-GRE: Lallemand. Brings fresh pear and melon tones foreword along with good mouthfeel. Useful for reducing herbaceous and vegetal notes in under-ripe fruit.

## **Viognier**

- CITRUS: CellarScience<sup>™</sup>. Liberates thiols releasing stone fruit, passionfruit, and floral aromas and flavors that help make Viognier special. Can ferment at cooler temperatures, but the enzymatic cleaving activity is highest at around 56-60°F. This strain is good at preserving acidity.
- LUSCIOUS: CellarScience™. A good choice if making a richer Viognier with sur-lees aging. Ferment it cooler and emphasize the creaminess and the toasted champagne-like complexity of sur lie aging. Or crank it up warmer and add some more tropical notes. After fermentation, this yeast naturally goes nuclear, implodes, and breaks open its cell walls. Polysaccharides such as mannoproteins are released into the wine. Being a low producer of SO2, it is naturally a great candidate for later malo-lactic fermentations.
- FLORAL: CellarScience™. Fresh fruit and floral flavor and aromas. A hybrid between Cerevisiae and Bayanus. Produces a wide range of flavors to add depth and complexity. It cannot assimilate sulfur which greatly reduces H2S. Low H2S and low volatile acidity are part of the secret to emphasizing fresh fruit flavors. The production of phenylethyl alcohol and its derivative β-phenylethyl adds sweet floral notes. Phenylethyl alcohol also helps extract thiols due to their similar polarity, contributing even more to citrus and floral flavors.
- BA11: Lallemand<sup>™</sup>. In Viognier, floral, stone fruit, and tropical flavors and aromas develop, along with clean aromatics, lingering flavors, and an intensified mouthfeel. Great single strain.
- QA23: Lallemand<sup>™</sup>. Often used in terpenic whites, it enhances the aromatic aspects of a grape. In Viognier,

- QA23 brings out the floral and tropical notes, making an elegant, fruit-focused, aromatic wine.
- **R2:** Lallemand<sup>™</sup>. Sauternes isolate is well suited for the creation of floral, tropical, intense, direct fruit-style wines, such as Viognier.
- ICV-D47: Lallemand™. Complex white with stone fruits and spice. Adds volume/mouthfeel. Barrel fermentation and lees aging are recommended. Lees contact gives ripe spicy aromas. Good single-strain or as a blending component.
- ICV-GRE: Lallemand™. Brings fresh tropical fruit and a good mouthfeel. Useful for reducing herbaceous and vegetal notes in under-ripe fruit.
- ICV-D254: Lallemand. Usually used as a blending component, D254 gives stone fruit flavors, aromas of nuts, smoke, and sourdough, along with a creamy mouthfeel. Good for adding complexity and mouthfeel to a blend.

#### Rosé:

- FRESH: CellarScience™. A Bayanus strain that is a top choice for Roses. Can ferment at lower temperatures, a nice option for producing cleaner, more focused fruit flavors. Emphasizes stone fruit flavors. Super easy to ferment with lower nutrient needs and a very high alcohol tolerance up to 16%.
- Rhône 4600: Lallemand™. Complex aromatics along with strawberry, pear, and pineapple. Enhances mouthfeel and volume. Great single strain choice or as a blending component.
- ICV-GRE: Lallemand<sup>™</sup>. Stable fresh fruit characters, along with high fore-mouth volume enhancement. Good as a single strain or as a blending component.
- ICV-D21: Lallemand™. Enhances mouthfeel while maintaining acidity for bright, fresh fruit in the final wine. Useful as a blending component to freshen-up hot climate/high pH fruit.
- W15: Lallemand<sup>™</sup>. Bright fruit with heavy mouthfeel makes W15 a good single strain selection by itself or as a blending component.
- **71B:** Lallemand™. "Fruit salad" character, long-lived aromas from the production of esters and higher alcohols. Can metabolize up to 30% of the malic acid in a must.

# French/American Hybrids and Labrusca

Here at MoreWine! we are aware of the growing prevalence of French Hybrid and Non-Vinifera grapes being used for home and commercial winemaking. Being located in California, we have little to no opportunity to work with these fruits and as such cannot include our notes on pairing yeasts with them. However, as we are committed to providing our customers the best and most accurate information, we'd like to ask if you wouldn't mind sharing your notes

about working with these grapes. Please send any tasting notes for the yeast strains you are using, as well of course as the type of fruit and any fermentation data that you can provide us, i.e., starting Brix, pH, temperature levels, etc. to: pairings @morewinemaking. com This will allow us to start developing a database from which we will be able to better support our MidWest and East Coast fellow winemakers in the future.

# **REDS (Hybrids & Labrusca):**

- Baco Noir: Wood, spice, richness, rustic, smoky. High acidity. Suggested yeasts: AMH, BDX, MT, SYR, BM45, ICV-D254, RED.
- Chambourcin: Spicy, fragrant, herbaceous, with good acidity and structure. Suggested yeasts: AMH, SYR, RC212, T306, MT, BM45, RED.
- Chancellor: Rich body, tannic, Good for adding body and structure to blends. Flavors of plum and cedar. Suggested yeasts: BDX, MT, SYR, VQ15, BM45, BIG RED.
- Concord: Suggested yeasts: BDX, MT, RED.
- De Chaunac: Fruity, with low to mild tannins. Suggested yeasts: BDX, MT, SYR. BM45, RC212, PURPLE.
- Maréchal Foch: Deep purple color, medium structure, with deep berry fruit. Suggested yeasts: AMH, RC212, ICV-GRE, BDX, MT, SYR, BM45, T306, VQ15, PURPLE.
- Norton (Cynthiana): Deeply pigmented, spicy raspberry, often with coffee and chocolate notes. Suggested yeasts: ICV-D254, ICV-GRE, BM45, AMH, BDX, MT, SYR, BIG RED, RED.
- Frontenac: BM45, RC212, RED.

# WHITES (Hybrids & Labrusca):

- Aurore: Suggested yeasts: W15, R2, ACV-GRE, AMH, ICV-D47, QA23, T306, 58W3, LUSCIOUS, BOUQUET.
- Catawba: Suggested yeasts: T306, R2, W15, ICV-GRE, BOUQUET.
- Cayuga: Suggested yeasts: ICV-D47, T306, W15, 58W3, R2, ICV-GRE, LUSCIOUS, FLORAL.
- Delaware: Suggested yeasts: W15, R2, T306, FLORAL.
- Muscadine: Suggested yeasts: W15, R2, 58W3, T306, QA23, ICV-D47, AMH, ICV-GRE, LUSCIOUS.
- Niagara: Suggested yeasts: W15, T306, QA23, R2, FLORAL, FRESH.
- Seyval: Suggested yeasts: W15, ICV-D47, QA23, T306, R2, ICV-GRE, 58W3, LUSCIOUS, BOUQUET.
- Vidal: Suggested yeasts: QA23, T306, W15, R2, ICV-GRE, 58W3, AMH, BOUQUET.
- **Vignoles:** Suggested yeasts: R2, T306, W15, ICV-D47, 58W3, AMH, ICV-GRE, FLORAL, LUSCIOUS.