

DELTEIL INTERNATIONAL WINE CONSULTING



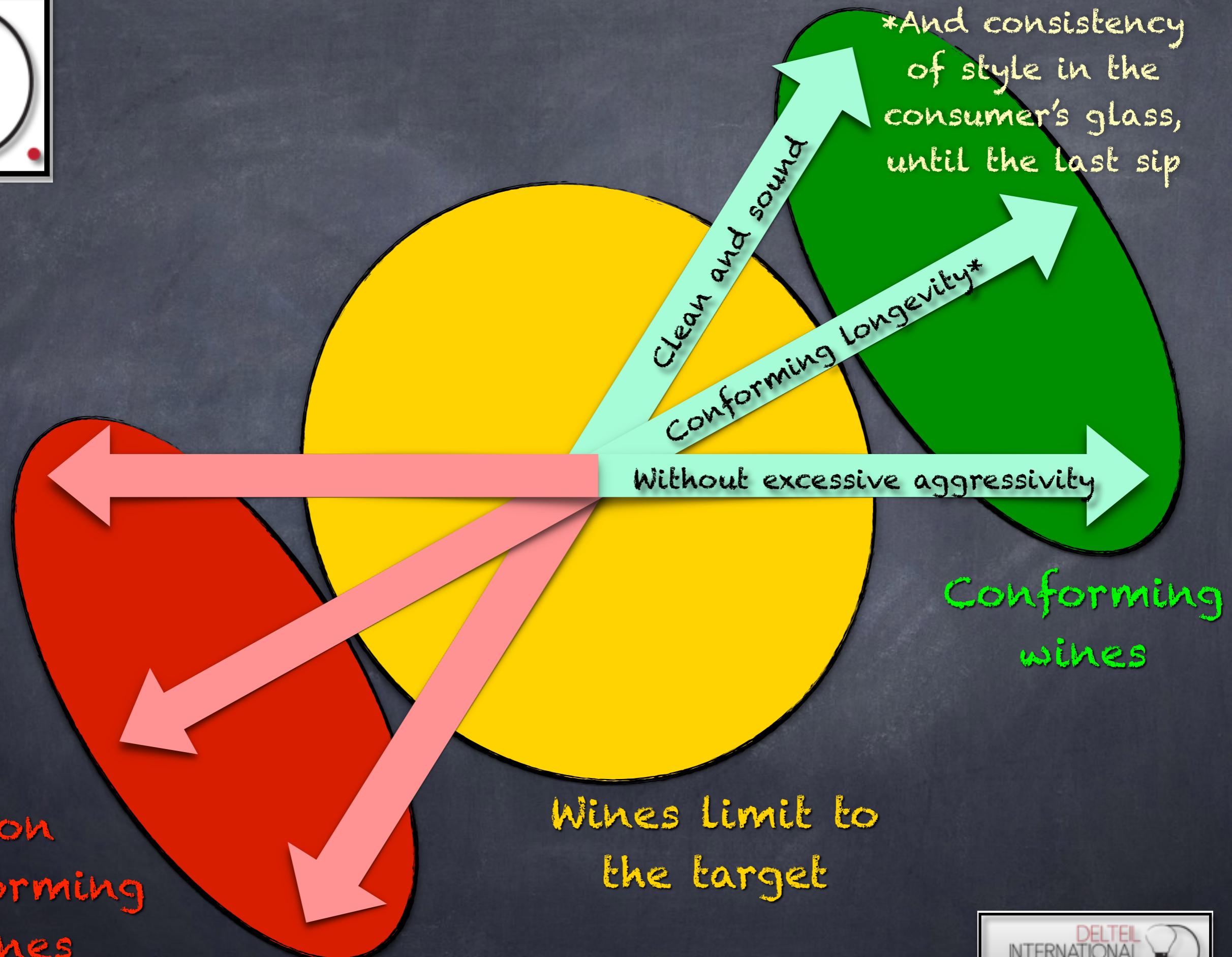
Aging with different types of oaks: adaptations according to berry profiles and winemaking



[www.toneleria.com](http://www.toneleria.com)



Non conforming wines

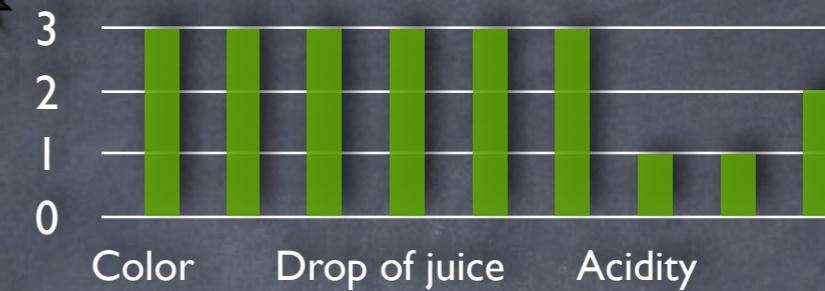
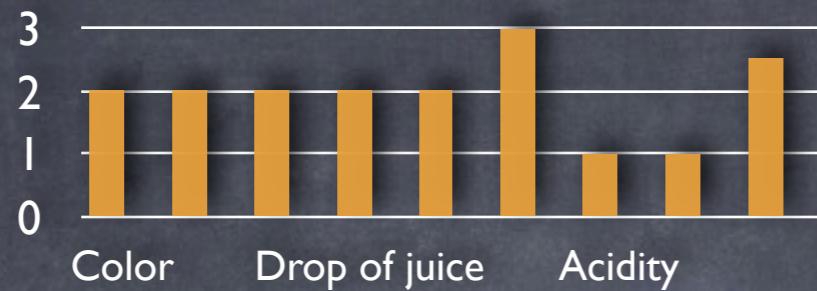




## How to adapt the aging?

A precise example for  
a >12€ Pinot Noir

The goal is to be able to blend both lots during aging and get a conforming wine for the segment



Blocks Fr-Ambrosia  
Complex 400 g/hL

Oak  
fragments

Blocks Fr-Ambrosia  
Complex 300 g/hL

Oak  
fragments

Yeast strain

Yeast  
protection

Yeast strain

Yeast  
protection

Cultivated yeast for  
maceration

Inactivated yeast for  
maceration

Coinoculate yeast - bacteria

Coinoculate yeast - b

Lactic bacteria strain

Lactic bacteria strain



# Absolute key-points with cold pre-fermentation maceration

Adjust pH

SO<sub>2</sub>

Destem

Crush

Enzymes

Oak  
fragments

Yeast  
strain

Inactivated  
yeast for  
maceration



Coinoculate yeast - bacteria

18°



## Why it is a key moment adding toasted oak during maceration-fermentation

- There are key combinations between fresh grapes elements and oak to reach axis A, B & C for style and longevity. Combinations mean oak diffusion and oak absorption. Oak, like OptiRed, is an important sponge to balance the fermenting juice for color and aroma stability
- Later you cannot combine GRAPE elements with oak: too late ! You have forever lost some key actions.
- Oak fragments are important elements in the fermentation regulation, particularly the sulfur off-flavors management



## Why it is a key moment adding toasted oak during maceration-fermentation (2)

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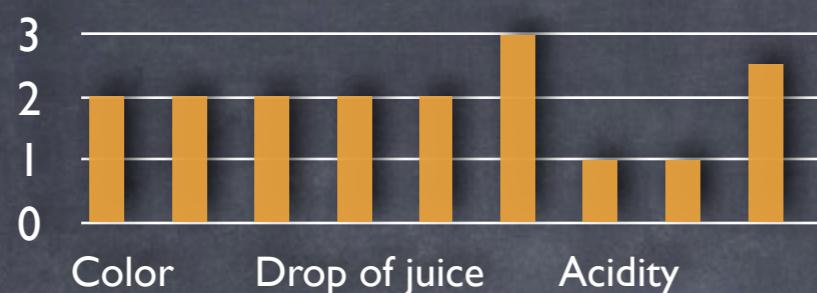
- When you early saturate the fermenting juice with oak elements, the wine, later, has a far smoother behavior during aging with oak (barrels, staves, etc.)
- Good blocks during maceration is also an investment to preserve and use your expensive barrels longer



# When you are devatting after maceration



- Clean the blocks with water, until water runs clear.  
Add it in a lower quality red wine during malolactic



Inactivated yeast

Rhythm of first rackings

Rhythm of first rackings

Inactivated yeast

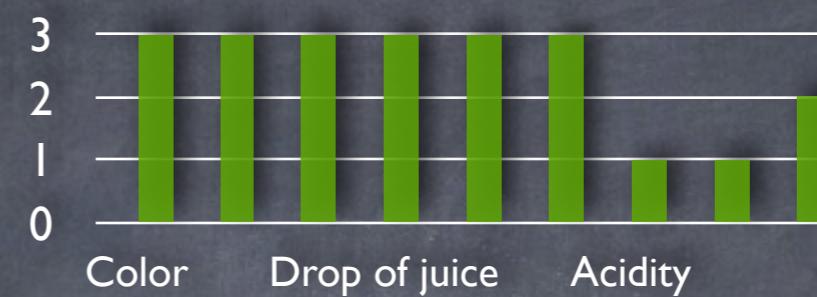
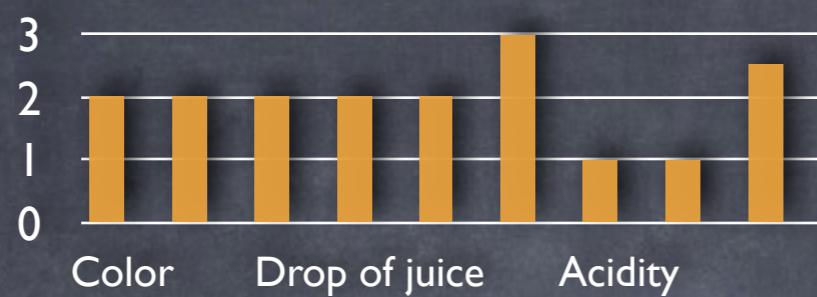
1. Draining: add 1 g/hL Reduless  
Rack after 24 hours
2. Dryness: add 1 g/hL Reduless  
Rack after 24 hours
3. One week later: add 1 g/hL Reduless  
~~Rack after 24 hours~~  
Add staves 250 g/hL

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2. Dryness: add 1 g/hL Reduless  
Rack after 24 hours
3. One week later: add 1 g/hL Reduless  
~~Rack after 24 hours~~  
Add staves 150 g/hL

French oak, Ambrosia Complex

French oak, Ambrosia Complex

Here we are at the beginning of malolactic fermentation



### Aging actions around malolactic

Add staves 250 g/hL

French oak, Ambrosia Complex

1. Stir 2 times a week
2. If malolactic is not active after 2 weeks in this tank: stir and rack after 2 days. Clean the staves. They follow the wine

### Aging actions around malolactic

Add staves 150 g/hL

French oak, Ambrosia Complex

1. Stir 2 times a week
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During all malo, slightly smoky plum/cherry aroma must be present to build the top quality mineral/fruity Pinot Noir style in the bottle. If it disappears, add an extra 50 g/hL staves. In other words, here you must smell more ripe smoky characters than your goal in the bottle on the market.



## Advantages of malolactic with staves, even for top quality Pinot Noir

- New oak is a key point during malolactic to develop and stabilize your color and aromas: we have it, of excellent consistent quality with Ambrosia staves.
- You can adapt the dosage according to the grape sensory profile. Weaker the colloidal balance of the grapes, more oak to compensate the balance
- You manage one or 2 tanks per lot: with one tasting, temperature, pH, agitations monitoring you manage precisely 100-300 hL. Precision is an absolute key point

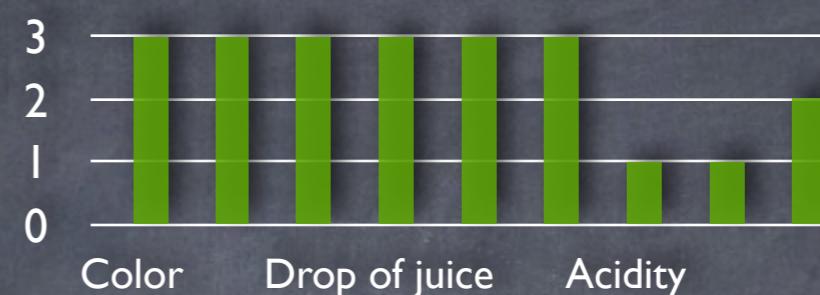
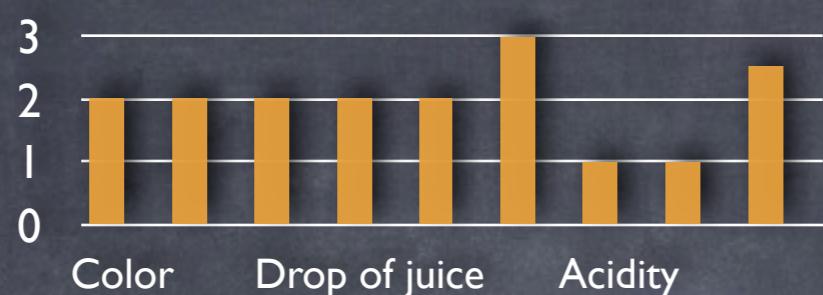


## Advantages of malolactic with staves, even for top quality Pinot Noir (2)

- Efficient cost management. For example, 100% new barrels malo for a 12 euro a bottle Pinot Noir that would need much new oak during malo is a complete economical nonsense! While 300 g/hL Ambrosia staves in a tank is a good practice: technically efficient and cost acceptable
- You'll keep your expensive barrels longer and cleaner : you fill your barrels with a clean, right pH, sulfited (right molecular SO<sub>2</sub> level), not aggressive exchanging wine: better aging and better keeping of your barrels



As soon as the malic acid  
is completely consumed



### Preparation for barrels aging

End of MLF:

1. Add 1 g/hL Reduless + Tartaric acid to lower pH to 3.40 + 3 g/hL SO<sub>2</sub>.
2. Rack after 24 hours. Clean the staves with water. They follow the wine.
3. Add 20 g/hL Noblesse. 12°C. Wait 1 week or 2
4. Add 1 g/hL Reduless. Wait 2-3 days.
5. Rack
6. Add 10 g/hL Noblesse and go to barrels

### Preparation for barrel aging

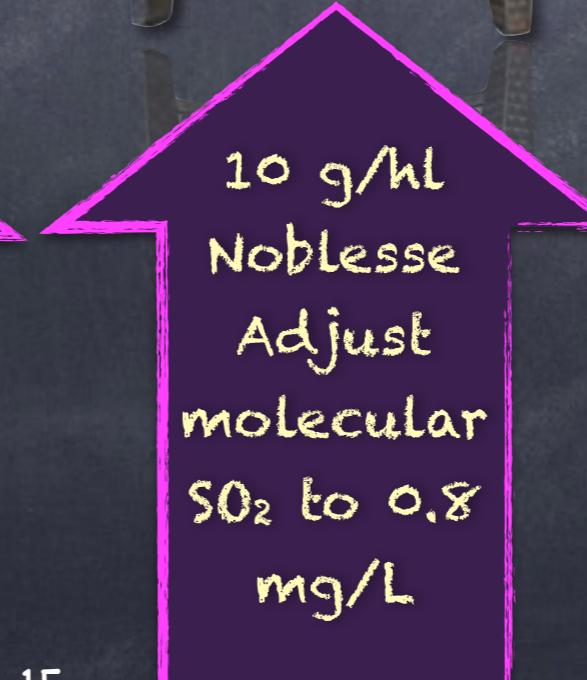
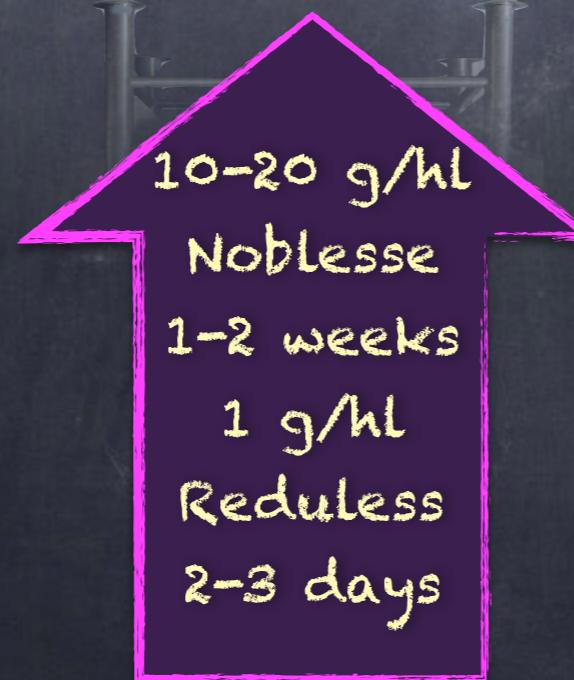
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Rack after 24 hours.  
Clean the staves with  
water. They follow  
the wine.

Fill the barrel while  
stirring



The goals are:  
1. need stirring  
only once a month  
2. be able to wait  
until May-June for  
the first racking



# Many advantages with this pre-barrel procedure

- Fill barrel with wine with dead bacteria and yeast, well protected wine with 0.8 mg/L molecular SO<sub>2</sub>. Unless you re-contaminate your wine, no future Brett & C° problems
- Only clean lees (several rackings when the wine is protected) and new lees (new Noblesse) that don't give problems when they compact: you are not obliged to stir more than once a month
- The wine-barrel exchanges are soft: the wine is already saturated with oak elements (blocks and staves) and Noblesse buffers the oak-wine exchanges
- Always Keep your barrel room at 12°C



Now comes the big economical choice:  
how much barrel volume in the blend,  
according to the market segment?



50% of the  
lot



New  
Ambrosia  
French oak,  
Complex



1 year  
1 zig-zag  
every 3  
barrels

50% of the  
lot



33%

33%

33%



New

1 year  
1 Ambrosia zig-zag  
every 3 barrels

2 years  
1 Ambrosia zig-zag  
every 2 barrels



33%

33%

33%



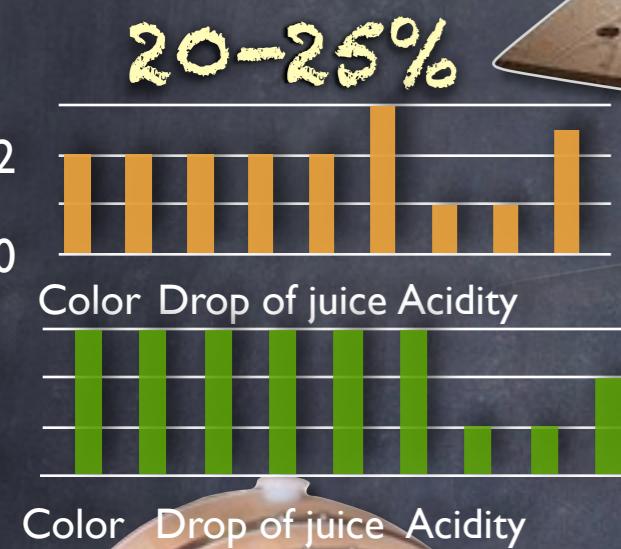
New

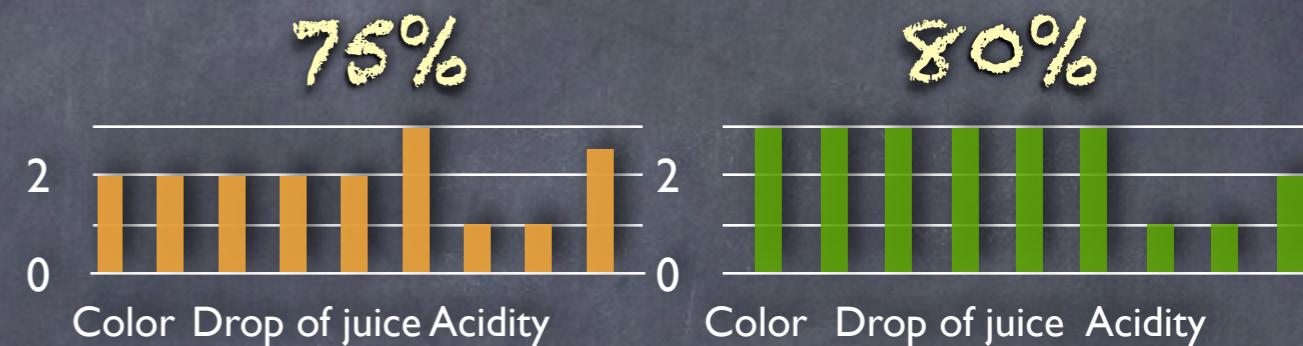
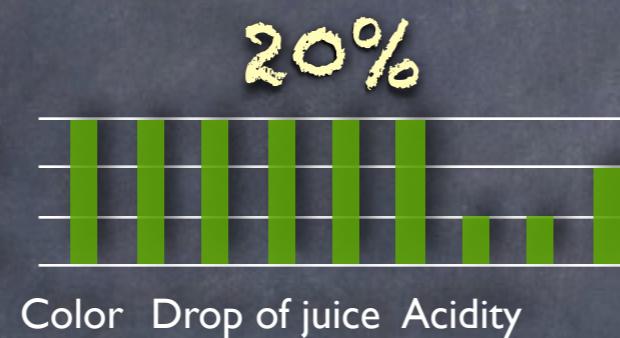
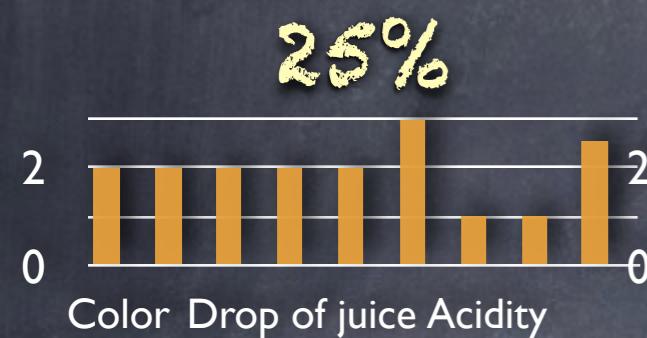


1 year  
1 Ambrosia zig-zag  
every 3 barrels



500 g/hl Staves  
Ambrosia Complex





New  
20-25% of the  
lot



600 g/hL Staves  
Ambrosia Complex  
75-80% of the Lot



# Classical mistakes to avoid

- Buy cheap barrels to get more barrels. Non-conforming barrels make non-conforming wine.
- Believe that green oak will bring « freshness » to your Pinot. It will bring herbaceous-moldy aromas and harshness, dryness and bitterness
- Mistake dominant basic sulfur-off flavors for good minerality



# Some general advices for your oak budget

- For each lot, define your budget
- Intelligently divide it between good barrels and staves
- Calculate 600-700 g/hL staves for the « botti » or tank volumes. Over 12 euro/bottle, you cannot afford to remain short of staves
- Then calculate how many new barrels you can buy with the remaining sum



# Working in large wooden vessels « botti »



French oak, Ambrosia Complex

Start with 200 g/hL

After 2 months: add 100 g/hL

After 3 months: add 100 g/hL

After 4 months: add 100 g/hL

Every month, check if you need a  
1 g/hL Reduless addition



12°C

Stir once  
a month

Noblesse

Start with 20 g/hL

After 2 months:

add 10 g/hL

After 3 months:

add 5 g/hL

After 4 months:

add 5 g/hL



# Working in tank



French oak, Ambrosia Complex

Start with 300 g/hL

After 2 months: add 100 g/hL

After 3 months: add 100 g/hL

After 4 months: add 100 g/hL

Every month, check if you need a  
1 g/hL Reduless addition



12°C  
Stir 2  
times a  
month

Noblesse

Start with 20 g/hL

After 2 months:

add 10 g/hL

After 3 months:

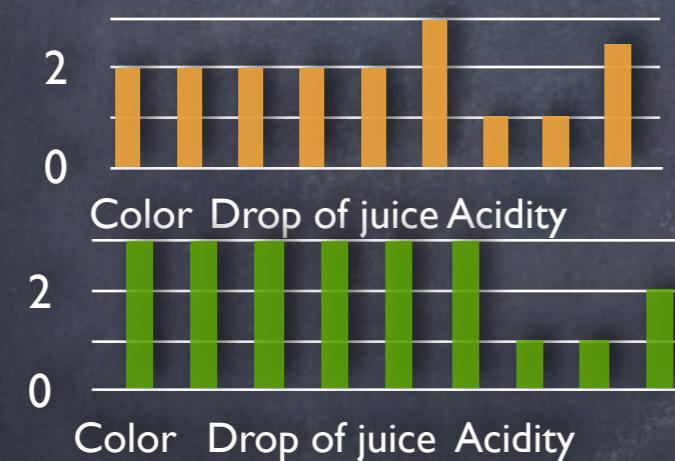
add 10 g/hL

After 4 months:

add 10 g/hL



# Working in new barrel



12°C  
Stir 1  
times a  
month

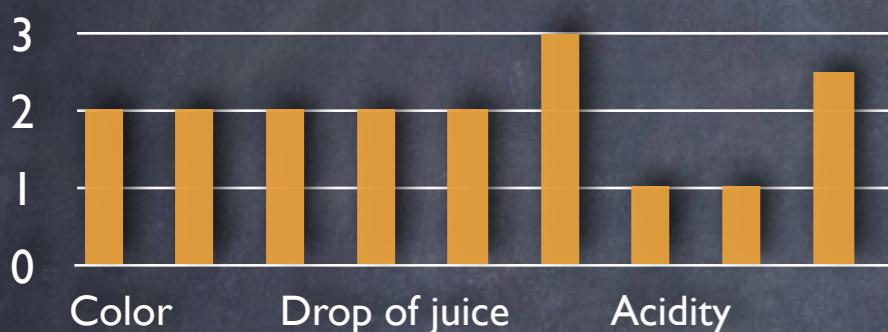


Noblesse  
Start with 10 g/hL  
After 2 months:  
add 10 g/hL  
After 4 months:  
add 10 g/hL  
After 6 months:  
add 10 g/hL

Every month, check if  
you need a 1 g/hL  
Reduless addition



# Working in 1 year old barrel



Move the zig-zags  
every 15 days

12°C  
Stir 1  
times a  
month



Every month, check if  
you need a 1 g/hL  
Reduless addition

Noblesse  
Start with 20 g/hL  
After 2 months:  
add 10 g/hL  
After 4 months:  
add 10 g/hL  
After 6 months:  
add 10 g/hL



# Filling the 1 year old barrels





# 15 days after filling the barrels





# 30 days after filling the barrels



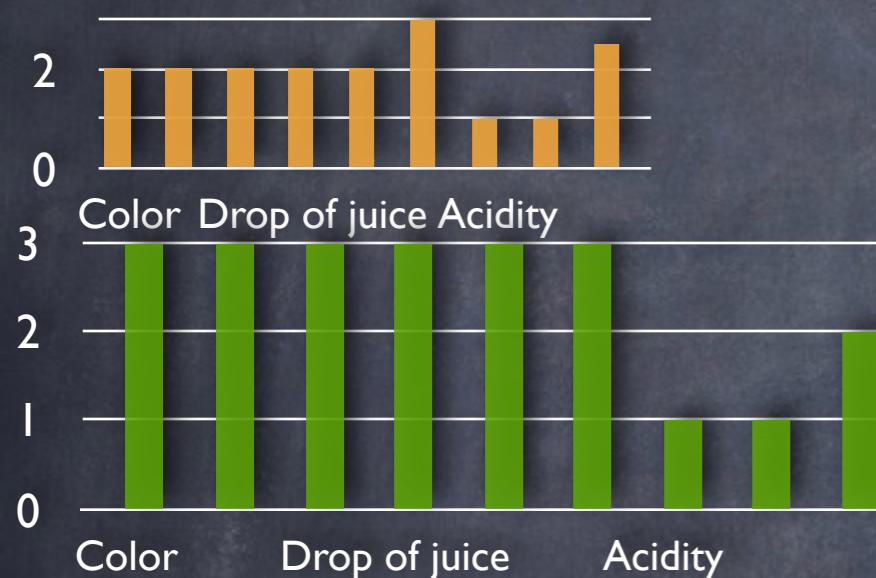


# 45 days after filling the barrels





# Working in 2 years old barrel



12°C  
Stir 1  
times a  
month

Move the zig-zags  
every 15 days



Every month, check if  
you need a 1 g/hL  
Reduless addition

Noblesse  
Start with 20 g/hL  
After 2 months:  
add 10 g/hL  
After 4 months:  
add 10 g/hL  
After 6 months:  
add 10 g/hL

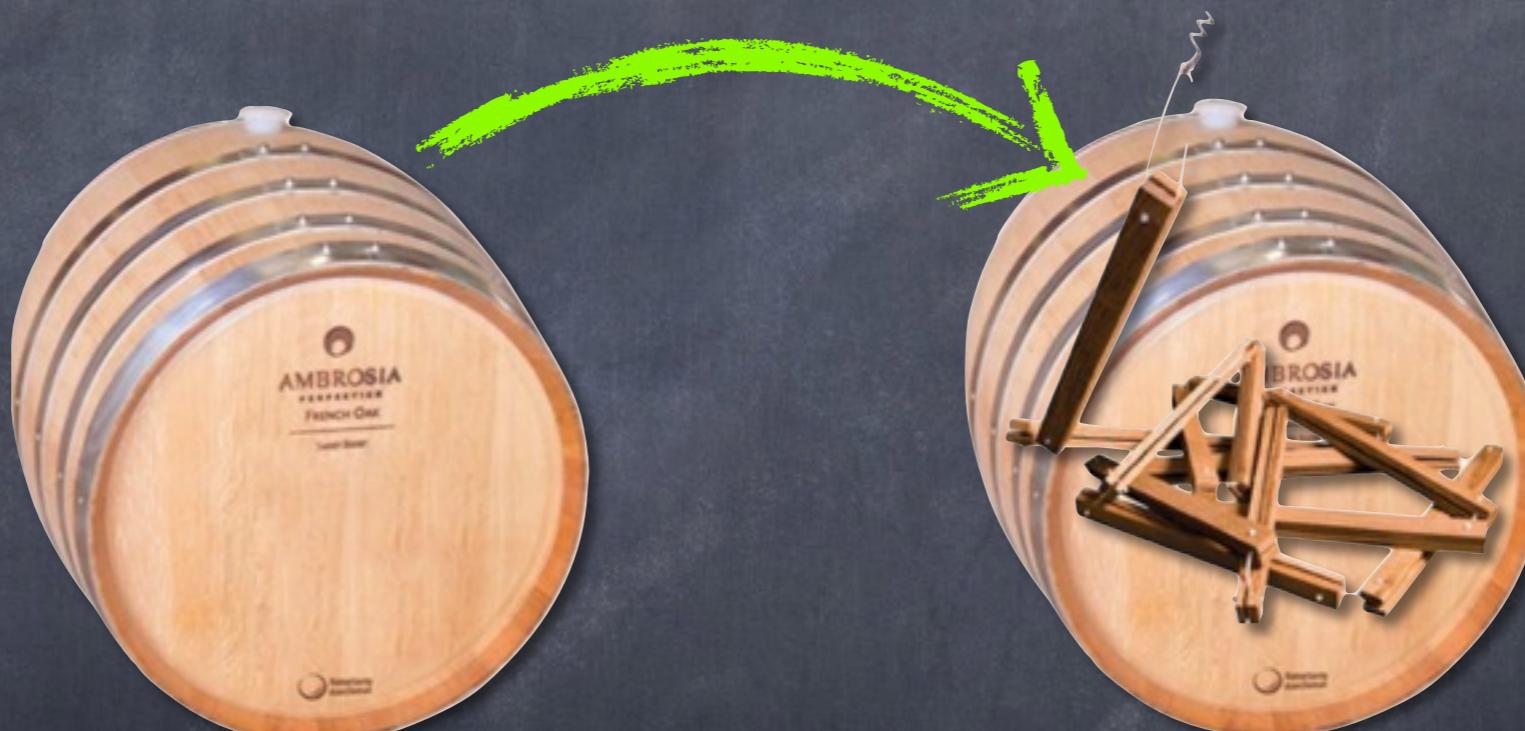


# Filling the 2 years old barrels





# 15 days after filling the barrels





# 30 days after filling the barrels



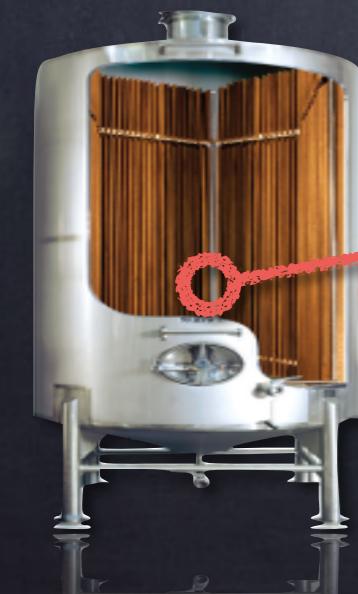


## Other aging actions

- One month after filling the vessels (barrels or tanks), analyse living Brett & C°. Check again after 3 months
- Every month check that pH is <3.4, molecular SO<sub>2</sub> between 0.6 and 0.8 mg/L



Normally, everything goes well until  
May-June.  
So prepare and do your spring racking



In the buffer tank: ➔

1. Check pH and molecular SO<sub>2</sub>.

Correct if necessary

2. Adjust Reduless  
(1 g/hL)

3. Wait 2-4 days

4. Clean the aging vessels

5. Rack and fill back the aging vessels



Eliminate the zig-zags  
in aged barrels



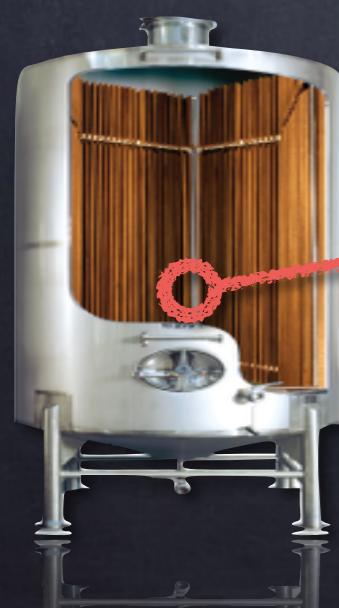
Add 100 g/hL new  
staves





In the buffer tank:

1. Check pH and molecular SO<sub>2</sub>. Correct if necessary
2. Adjust Reduless (1 g/hL)
3. Wait 2-4 days
4. Clean the aging vessels
5. Rack and make the general blend
6. Fill the aging vessels



Eliminate the zig-zags in aged barrels



Add 100 g/hL new staves





## For the next 6 months

- Keep temperature at 12°C, pH <3.4, molecular conforming
- Stir the barrels every 2 months, tanks and botti every month
- Add 0.5 g/hL Reduless and 5 g/hL Noblesse every 2 months
- In tank and botti, add 50 g/hL staves every 2 months



# Prepare bottling

- Take wine from aging vessels, checking every unit
- Blend conforming lots in a tank: normally all of them !
- Add 0,5 g/hL Reduless, 10 g/hL Noblesse, 50 g/hL staves; 12°C. Stir once a month. Until cold stabilization, filtration and bottling



Thank you  
for your  
attention

