MAKING GREAT MUSCADINE WINE FROM FERMENTATION TO BOTTLE

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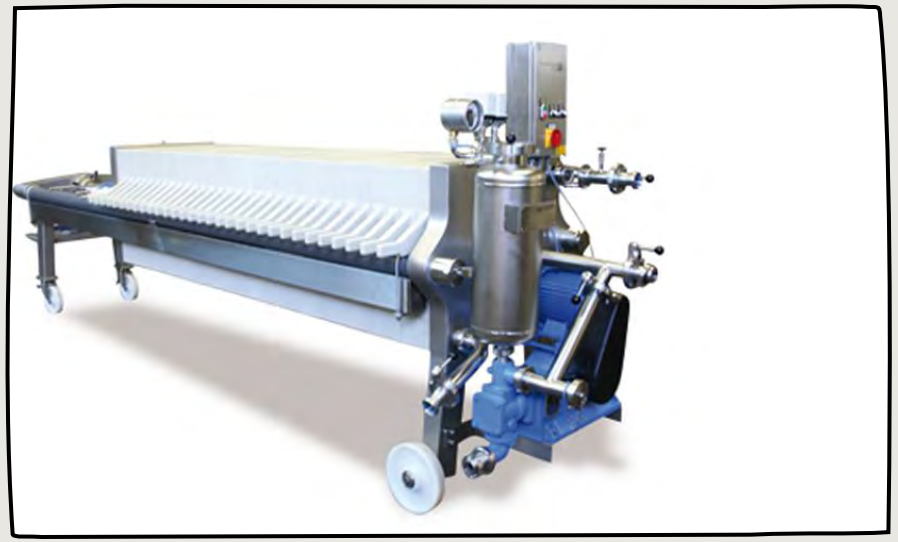
FERMENTATION STEPS

1. RACKING JUICE OFF GROSS SOLIDS
2. CHAPTALIZATION
3. YEAST SELECTION
4. YEAST NUTRIENTS
5. REHYDRATION
6. MONITORING FERMENTATION



FERMENTATION-RACKING

TO RACK OR NOT TO RACK .... You will have cleaner juice but will lose some as well...

Ways to avoid juice loss if you decide to rack.....

YEAST FILTER (BATCHES OVER 1000G)

ROTARY VACUME FILTER (HUGE BATCHES)

FERMENTATION-RACKING

NOT TO RACK:

....make sure you start fermentation within 8 hours of pressing juice with a quick acting yeast...

....there is a small loss of quality when you don't rack...

KEY EQUIPMENT ------ FERMENTATION

CHILLING CAPACITY!!!!!

THE ONLY WAY TO A SUCCESSFUL FERMENTATION THAT RESULTS IN GREAT WINES IS BY HAVING A WAY TO CHILL YOUR JUICE TO BELOW 65°F and maintain it!!!!

EASIEST WAY: <<<GLYCOL CHILLING SYSTEM>>>

CHAPTALIZATION

1. CHECK YOUR SUGAR LEVELS WITH A HYDROMETER

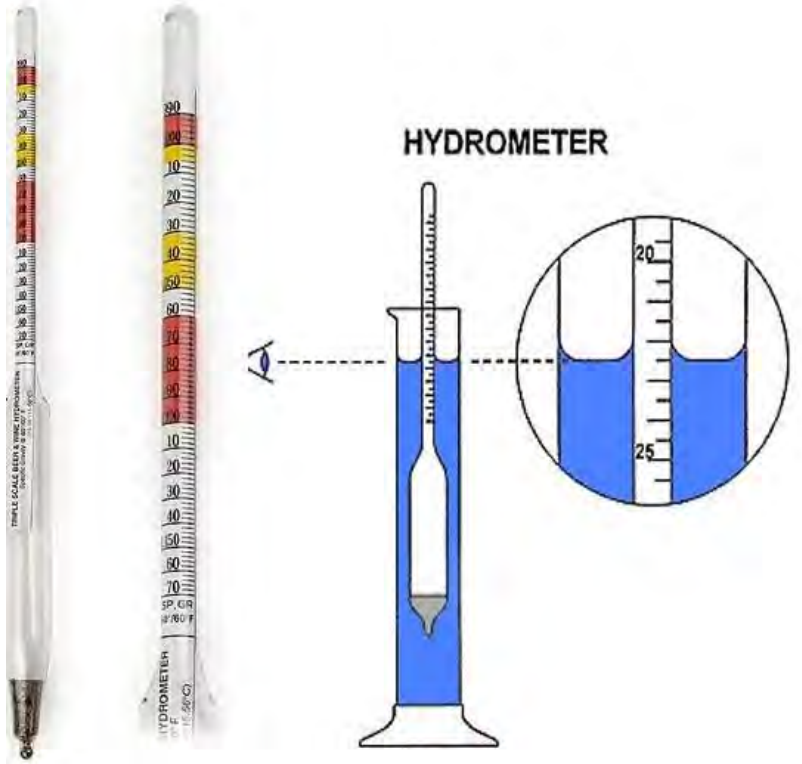
EXAMPLE.....TANK SAMPLE READS 14.2 BRIX

1 Baume = 1.8 Brix = 18 g/L sugar = 1% potential alcohol

WHITE WINE SHOULD HAVE AN ABV OF AT LEAST 10%

18g/L x 10% = 180g/L that we need to add....

ANSWER: How many liters do you need to sugar? (1 Gal. = 3.785 Liters)



CHAPTALIZATION

OR IF YOUR LIKE ME AND YOU RUN IN TERROR WHEN THERE IS MATH INVOLVED YOU CAN ALSO JUST GO TO..... www.wineadds.com

Go to FERMENT in the blue bar and click on BRIX ADJUST

Change AGENT to SUGAR and pop in your volume.... THIS IS A LIFE SAVER DURING BUSY HARVEST TIME ESPECIALLY UNTIL THEY FIGURE OUT HOW TO CLONE WINEMAKERS!!!!

CHAPTALIZATION

ADD YOUR SUGAR.....

Depending on the SIZE of your winery you can either mix a portion of the wine with sugar using a modified paint mixing tool OR you can invest in a sugar mixing tank....

When returning the sugar to the main tank, consider agitating the tank either by means of a pump over or a tank mixer attached to the man valve.

YEAST SELECTION (ALL YEAST IS NOT THE SAME)

Now that you have checked your brix again to make sure the sugar levels are where you want them....it is time to add that YEAST and kick off the fermentation!!!!

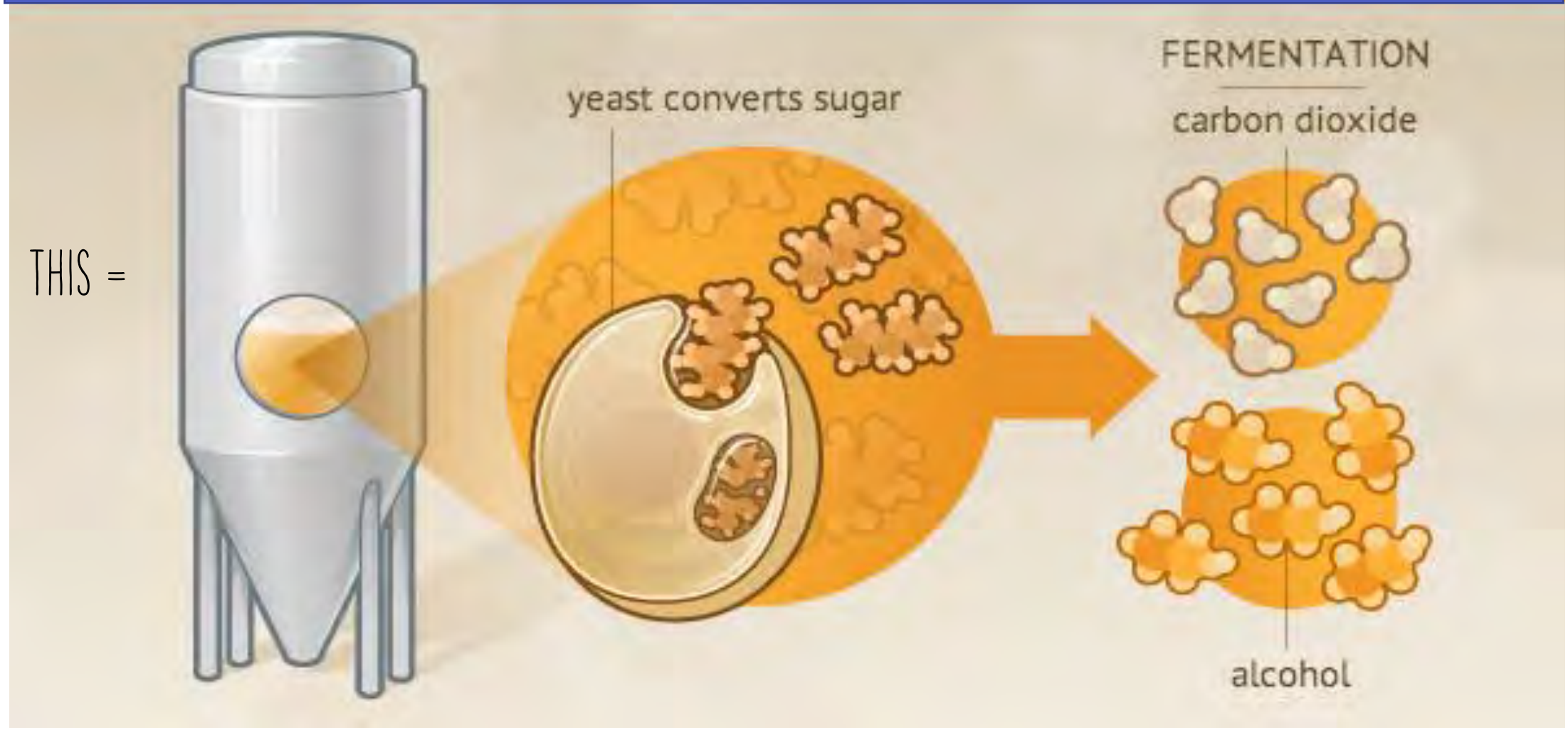
normally a healthy dose of yeast is considered 35g/L

-yeast is a point of stylistic consideration

-do you want a work horse that will complete fermentation or do you want certain aromatics to be enhanced? To work out all the details check out scottlabs or Carolina wine supply

YEAST, WHAT IS IT GOOD FOR?

THIS =



YEAST NUTRIENTS

Yeast needs nutrition in the form of Nitrogen to survive and ferment successfully.

When you receive your juice sample results a lab can tell you how much YAN is available already.

YAN= Yeast Assimilable Nitrogen

Once you have that number, you can calculate how much more YAN you will need. The YAN in your juice is directly linked with how healthy and well fertilized your soil is but is usually never enough to get the yeast through fermentation.

YEAST NUTRIENTS

Example: your sample says you have 114ppm (just a fancy way of saying mg/L)

In general to ferment you need 12.5ppm per 1°Brix

We sugared our wine to 20°Brix

12.5ppm x 20°Brix = 250ppm

250ppm - 114ppm = 136ppm (optimal amount of YAN for your fermentation)

YEAST NUTRIENTS AND REHYDRATION

Now comes the fun part....

Deciding what types of nutrients to add to fulfill your YAN requirement of 172ppm

Start with a rehydration nutrient such as Go-Ferm.

Then make another addition of nutrients at 2°-3° Brix Drop

(Example Fermaid O at 3.3lbs/1000gal)

Then make a final addition of nutrients at 1/3 sugar drop (Fermaid K 3.3lbs/1000gal)

MONITORING FERMENTATION

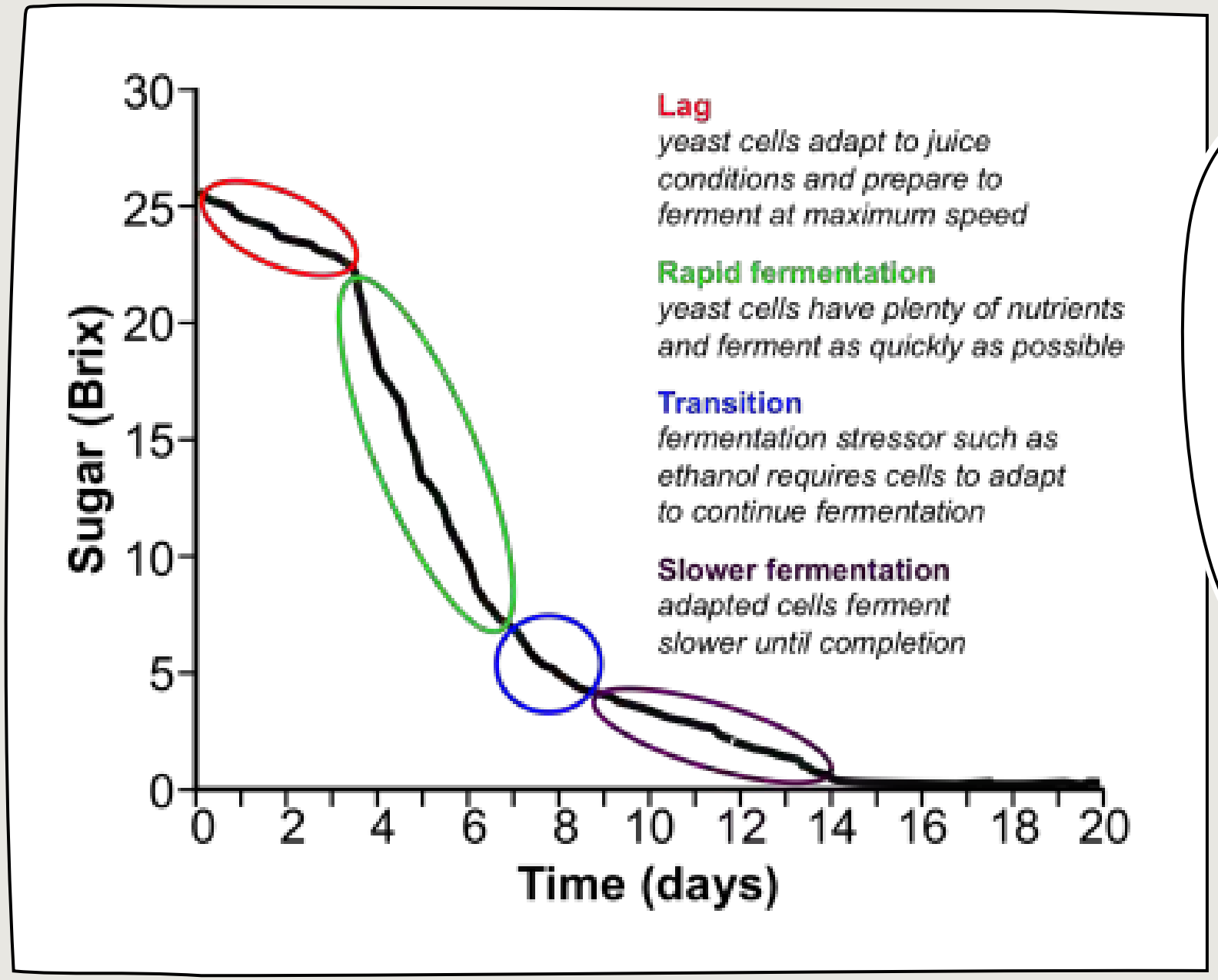
Take samples from each tank daily around same time

Measure temp at tank to make sure it is maintaining fermentation temp

Make sure temps reach room temp before sampling for brix

Cold samples will read higher than room temp

If samples are ultra foamy from high CO2 levels, stir to remove some of the CO2 as that also interferes with readings



MONITORING FERMENTATION

After fermentation, you should be able to plot your numbers on a graph....

POST FERMENTATION

1. First Racking
2. Second Racking
3. Cold Stabilization
4. Blending
5. Sterile Filtration
6. Bottling

FIRST RACKING

Approx. three weeks after fermentation wine can be transferred off racking valve to a fresh tank.
We call the sediment at this point GROSS LEES

Disposal of Gross Lees (in Europe it is often dumped back in the vineyards)

Do not use a flexible impeller pump to move gross lees

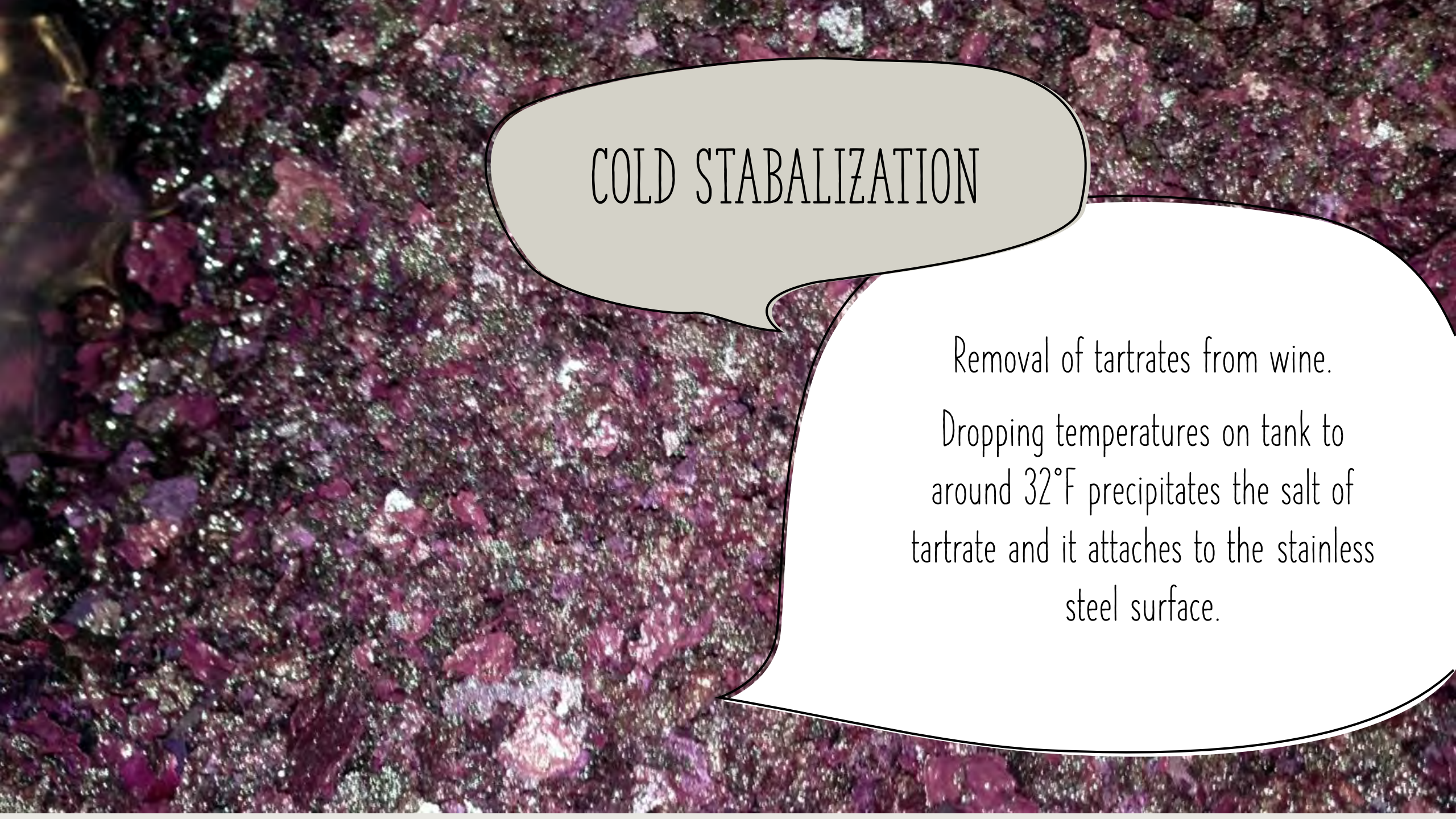
SECOND RACKING

Occurs two to three weeks after first racking

Sediment is referred to as fine lees

After second racking you can perform cold stabilization or consider adding any fining agents at this time if you wish. Some fining agents may have trouble settling out in low pH.

Consider Hot sparkalloid instead of a gelatin/silica sol fining



COLD STABALIZATION

Removal of tartrates from wine.

Dropping temperatures on tank to around 32°F precipitates the salt of tartrate and it attaches to the stainless steel surface.

COLD STABALISATION

-Wine must be visibly clear of solids before you start process

-Keeping tank at 32°F for two-three weeks can be hard on your energy bill

-Consider adding 4g/L of cream of tartar once 32°F has been reached and tank mixing for 4 hours

-Filter off with KD3 pads next day to let some COT settle out but maintain temp until filtering is complete

QUESTION????

Why not just filter after first racking, cold stabilize and then go straight to bottling. In other words speed up the process?

One major difference between vinifera winemaking and muscadine winemaking is that it is vastly more difficult to filter early on and perform fining. To save the endless quantity of filterpads and heartache, having the luxury to take the time to naturally settle the wine is wonderful.

BLENDING

Now you can consider how you want to blend your wines. Sample ratios out in lab to decide on final blends.

Consumers do tend to favor consistency so take excellent records for repeatability and note what worked and what didn't and why.

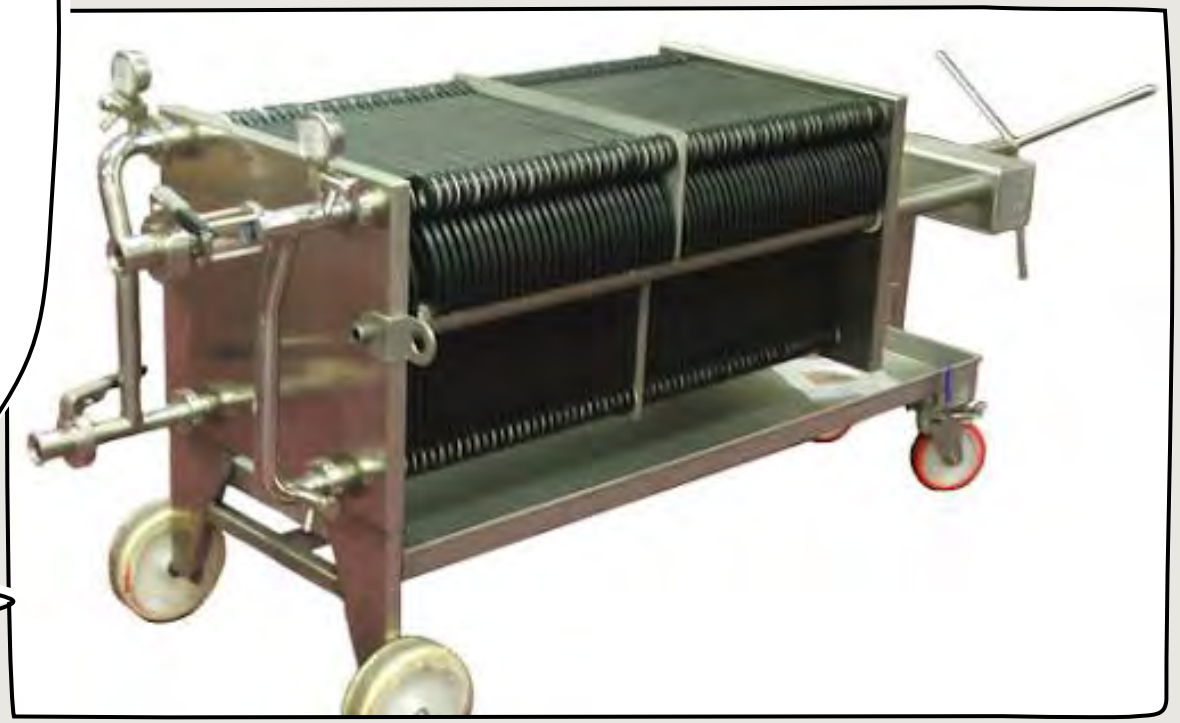
FINAL FILTRATION

Different types of filters:

-Crossflow

-Vertical DE

-Plate and Frame (most common)



THANK YOU FOR LISTENING

I am happy to answer any questions you might have!!!!