



Sherry

# Regulations

- Restrictions on amount of stock to be sold in any year.
- Minimum stock to be held – 500hl.
- Approximately 1/3 may be sold annually
- No longer necessary to fortify wines if natural fermentation results in alcohol levels of 15% minimum for Fino.
- 17% for Amontillado, Oloroso and Palo Cortado.
- Manzanilla wines require to be fortified.
- Unfortified wines may now be sold within the DO. and may be aged outside the “Sherry Triangle” in 6 other districts.



# Bodegas

## **Ageing and Shipping Bodegas (Bodegas de Crianza y Expedición)**

Permitted to sell and export bottled Sherry.

Traditionally located in the Sherry Triangle – Jerez, Puerto de Santa Maria and Sanlúcar de Barrameda but new regulations now permit wines to be matured in 6 locations outside the Sherry triangle. (Trebujena, Chipiona, Chiclana, Rota, Puerto Reale and Lebrija) and to use the Denominación de Origen.

## **Ageing and Stocking Bodegas (Bodegas de Crianza y Almacenado)**

Age the wines in order to sell them to shipping Bodegas (Almacenistas)

## **Production Bodegas (Bodegas de producción)**

Vineyard owners, which may be located outside the ageing zone. Harvests grapes and produces the Mosto which is used to refresh the soleras. (Only 30% shipping Bodegas grow their own grapes) May also market wines directly but may not use the Sherry DO.

# Sherry Grapes

**Palomino (90 %)**

Albariza soils.

For sweetening and Colour:

**Pedro Ximenez (PX)**

**Moscatel**

Arenas and Barros soils.

Recent planting of PX has declined with PX being brought in from neighbouring regions. (Montilla and Malaga)

Permitted under DO regulations.

**Other permitted varieties.**

**Mantúo Castellano, Mantúo de Pilas, Vijiriega,  
Perruno, Cañocazo, Beba.**

# Soils

3 types of soil:

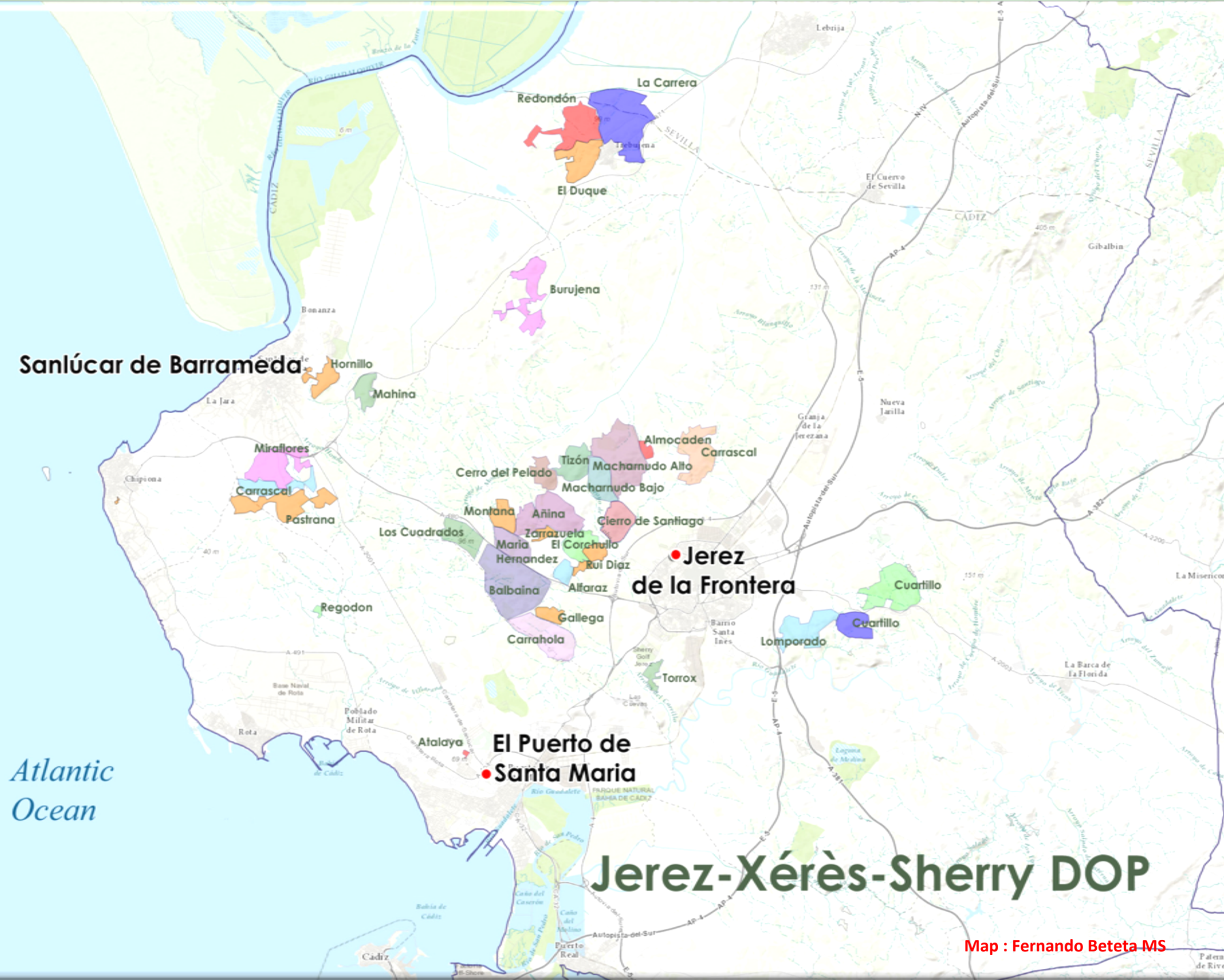
- **Albariza** - 60-80% chalk.
- **Barros** - (mud) Clay with up to 10% chalk.  
(Gives high yields)
- **Arenas** - (Sand) up to 10% chalk.  
Mostly planted with Moscatel.



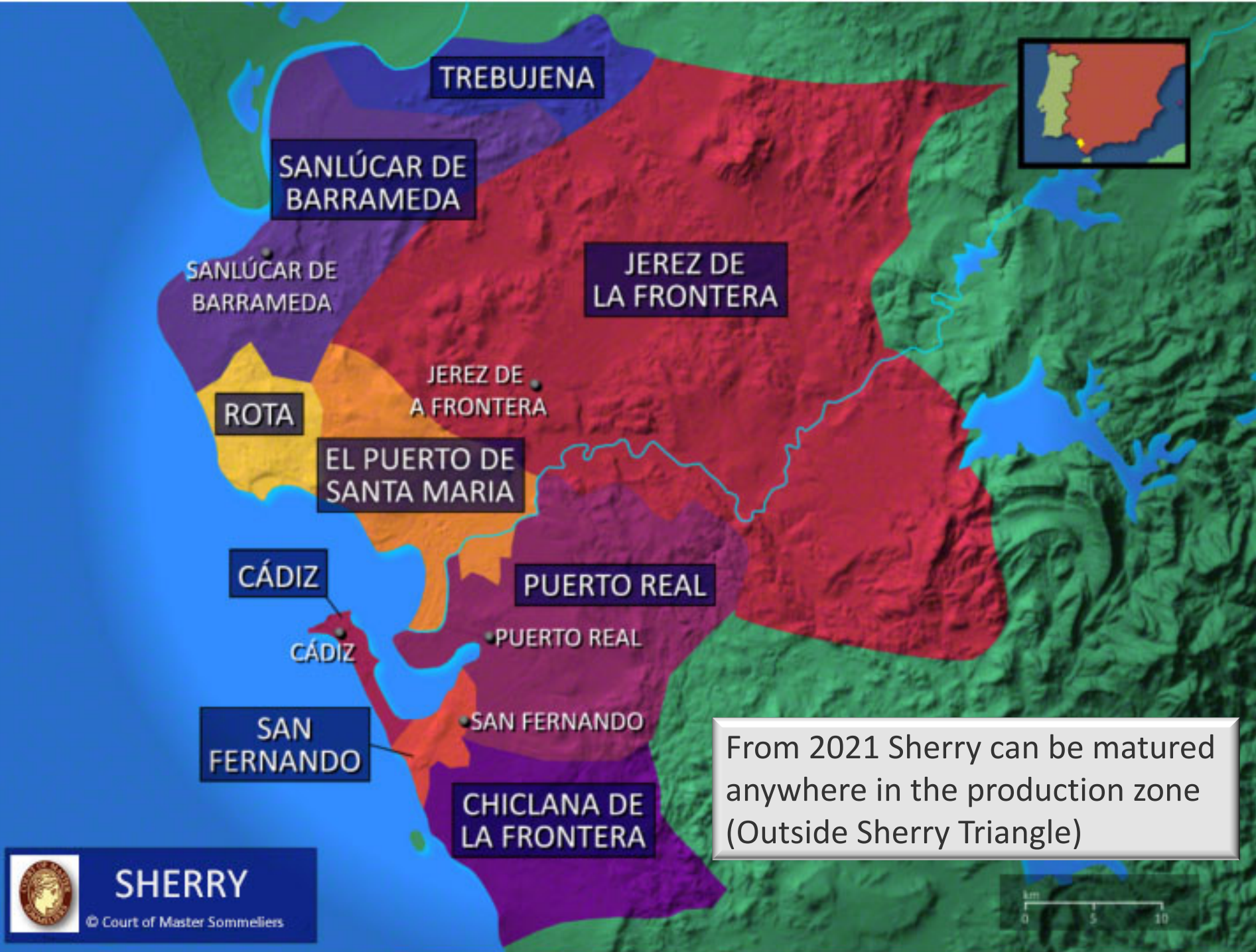
## **Albariza**

- Area classified as Jerez Superior and divided into Pagos.  
(vineyard district) & Parcelas (single plots)
- Officially classified in 2015.
- Approx 150 registered sites.
- Wines which are the product of individual vineyards may indicate on the label the name of the Pago.
- 8 most important:
  - **Anina - Balbaina- Carrascal - Marchanudo - Martin Miguel**
  - **Miraflores - Los Tercios – Torrebreba.**









From 2021 Sherry can be matured anywhere in the production zone (Outside Sherry Triangle)

# Vinification

- ✦ Picking early September.
- ✦ PX are sun dried to increase sugar levels.
- ✦ Palomino pressed immediately.
- ✦ First 70% of juices are used for Finos and Amontillados.
- ✦ Next 20% for Oloroso wines. Remainder used for distillation.
- ✦ Traditionally grapes plastered with Gypsum (Yeso) to precipitate tartrates. Now the must is treated with Tartaric acid to create acidity.
- ✦ Fermentation in stainless steel or occasionally in 600ltr. “Bota” at between 25 - 30°c.
- ✦ Produces acetaldehydes which give distinctive flavours. (yeast, nuts)
- ✦ Fortification - grape spirit + old wine. (If required)
- ✦ Fino’s fortified to max 15.5% and Olorosos to 17%.
- ✦ Regulations of 2021 permit wines with natural alcohol content of 15% /17% to be classified as Sherry (Unfortified wines)

# Residual Sugar

Wine style	Alcohol %	Sugar g/l
Fino	15 - 17	<4
Amontillado	16 - 22	<4
Oloroso	17 - 22	<4
Palo Cortado	17 - 22	<4
Pale Dry	15 - 22	4 - 45
Pale Cream	15 - 22	50 - 115
Medium	15 - 22	4 - 115
Cream	15 - 22	115 - 140
Pedro Ximénez	15 - 22	>212
Moscatel	15 - 22	>160
Dulce	15 - 22	>160

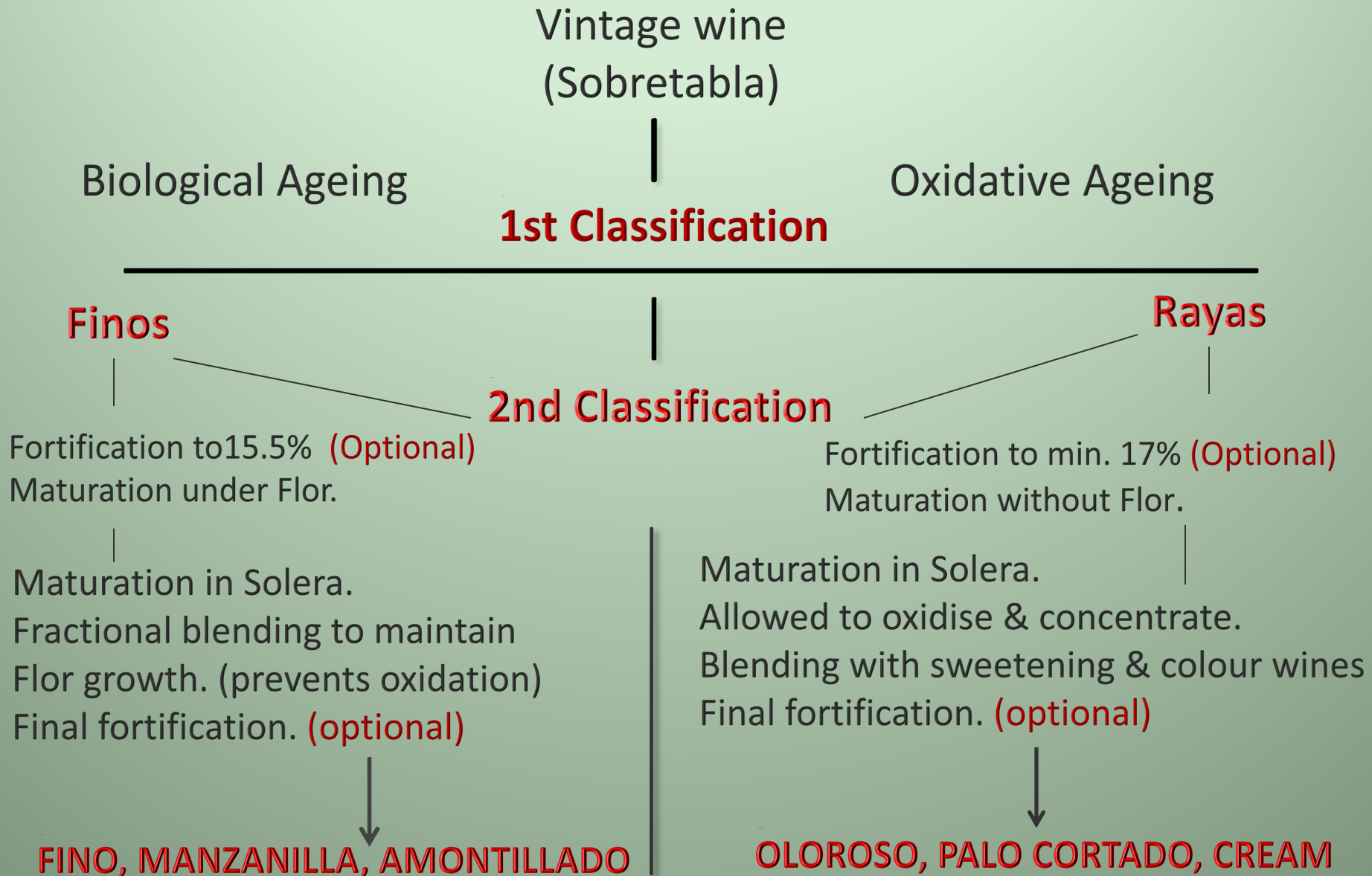




PX grapes for the production of sweet Sherry  
are dried to increase the sugar content  
“Soleo” process



# Sherry Development



# Flor

## Saccharomyces: (4 types)

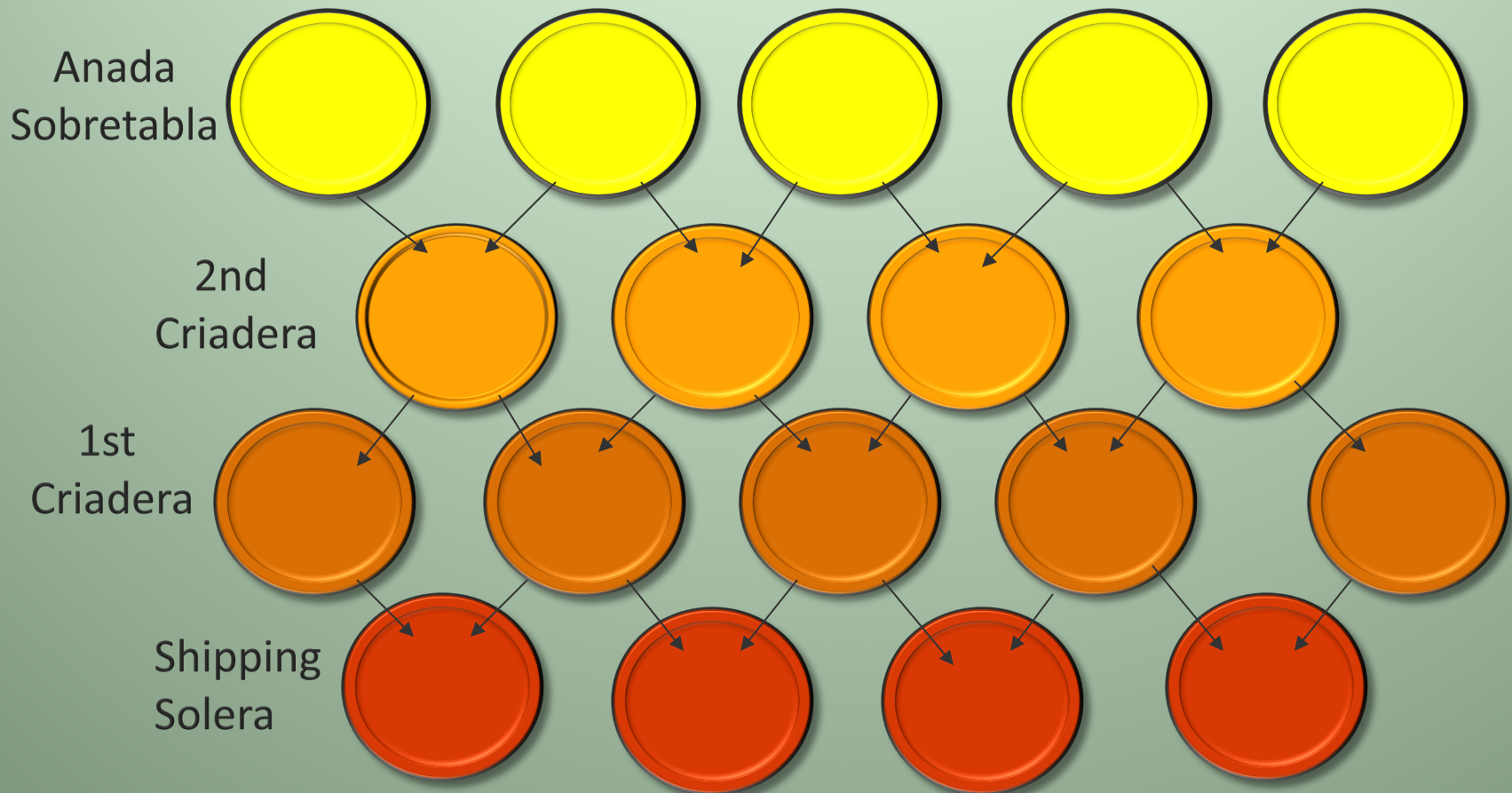
- Grows on the surface of casks with no more than 15.5% abv. Flor feeds on air, glycerine, polyphenols, fusel oils, volatile acidity and alcohol.
- Temperatures of 15-20°C are ideal for growth (Spring and Autumn).
- Needs humidity.
- Flor also affects colour:
- In coastal areas Flor remains thick all year and wines retain pale colour.
- Fino's from Jerez where Flor dies back in hot summer temperatures will allow some oxidation to a pale gold colour.



# Solera System

A method of fractional blending in which old wine is constantly refreshed with younger wine to ensure consistency.

Wine is taken from each Bota in one criadera to be blended into each Bota of the next Total capacity of Bota = 600litres. Filled to 500 litres.





# Solera System

- Palo Cortado and Oloroso Solera's usually have up to 3 Criadera's.
- Fino Sherries have more criaderas—as much as 16.
- At no time can more than  $\frac{1}{3}$  be removed for bottling from the Solera.
- The wine removed for bottling is called the “saca” as in the term “sack.”

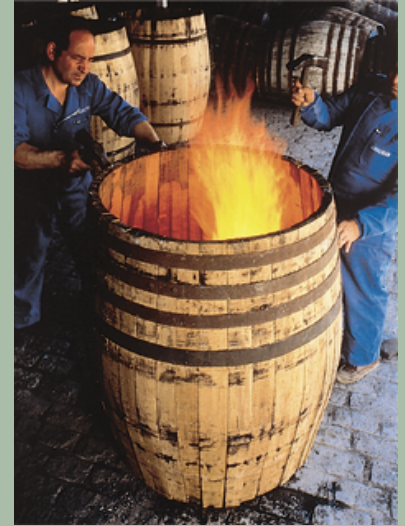




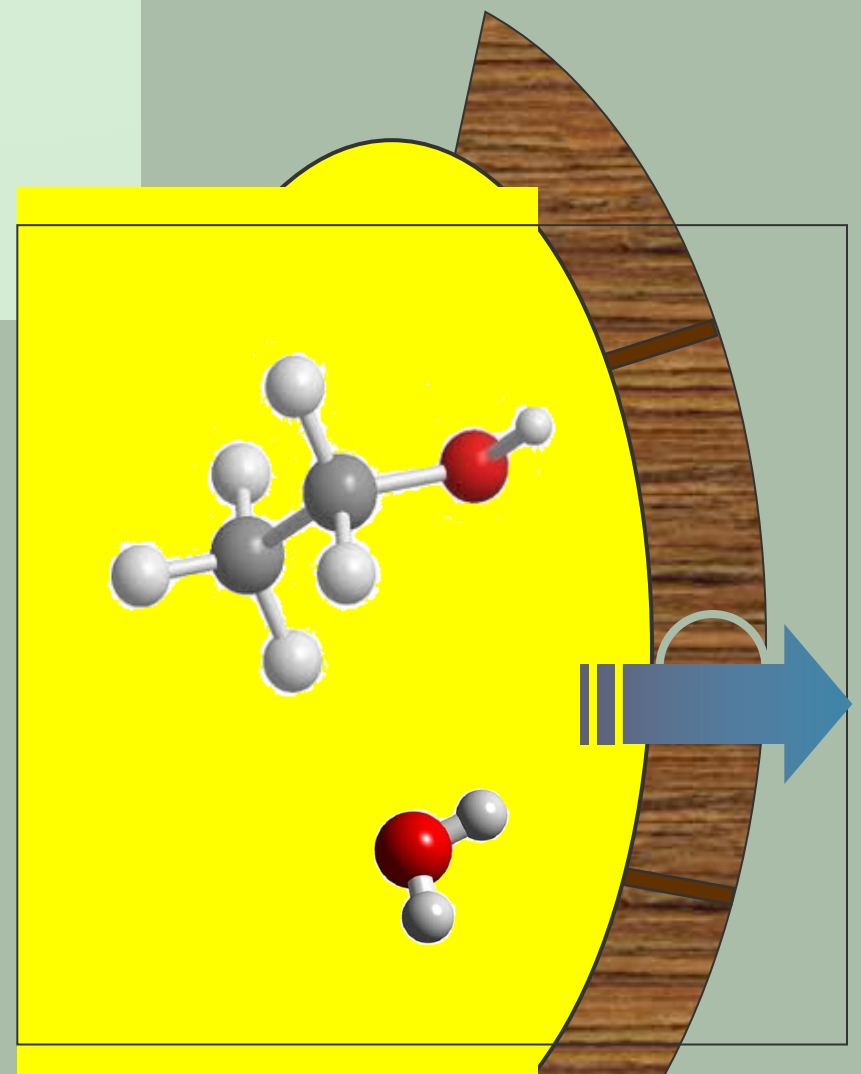
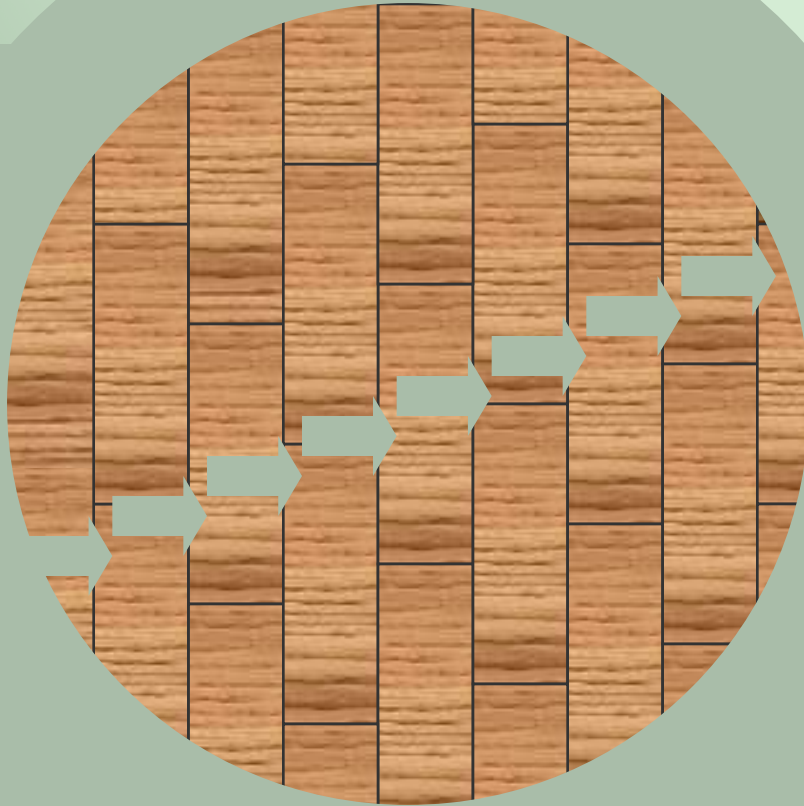
# The key factors of Sherry ageing

- Use of oak casks (“Botas”) heavily wine-seasoned.
- Dynamic method of “criaderas y solera”.
- Different ageing periods for each style.

- Bota made from American oak.
- 600 litres capacity.
- Only filled up to 500 litres.  
(biological and oxidative ageing)



# The “Bota”



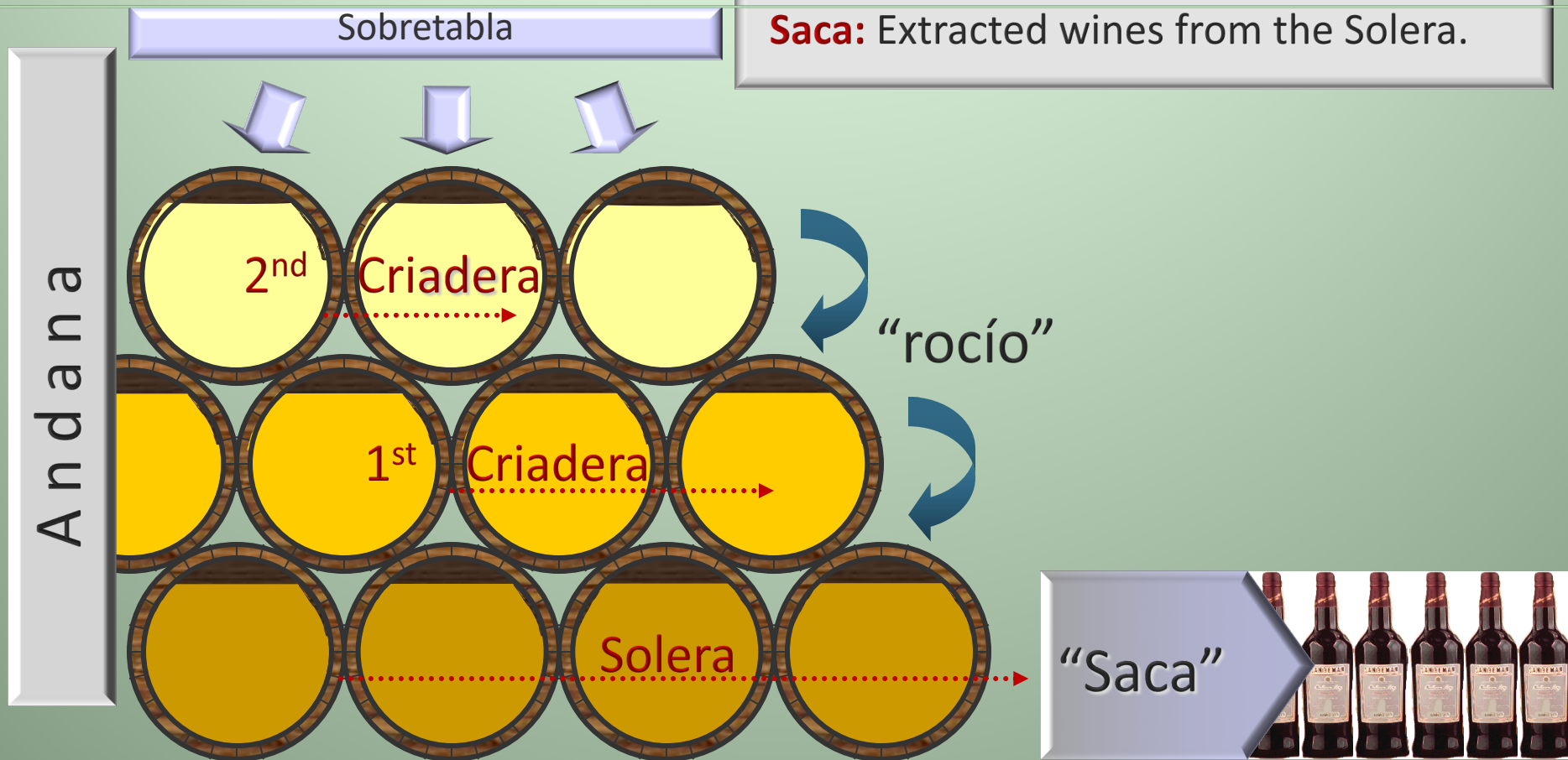
- Annual ullage (evaporation) of 3 to 4% of total volume. (20 litres per cask)
- Most of the loss is water.
- Concentration of alcohols ???

# How does the Solera work?

No limit on number of scales. (Criaderas)  
May be placed horizontally rather than vertically in large Soleras.

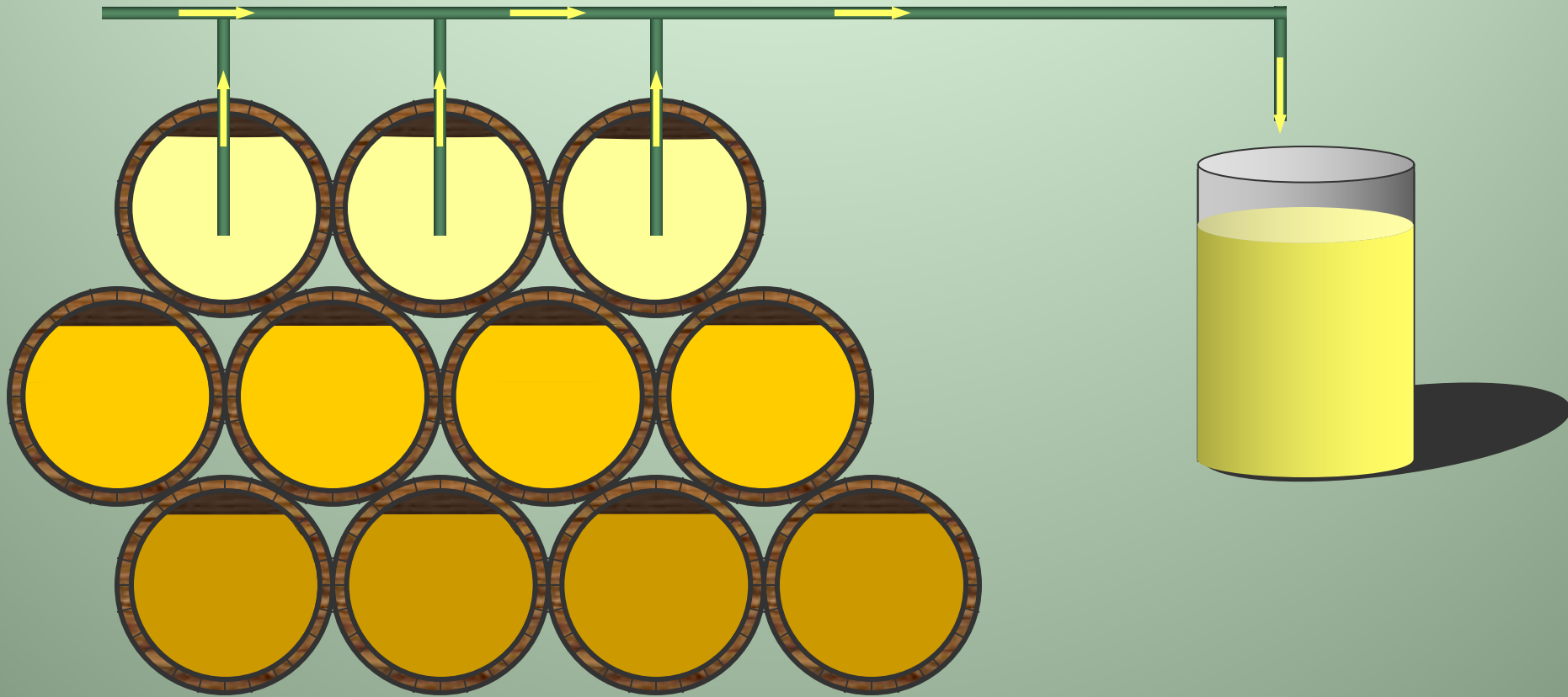
**Andana:** long row of casks.

**Saca:** Extracted wines from the Solera.



# How does the Solera work?

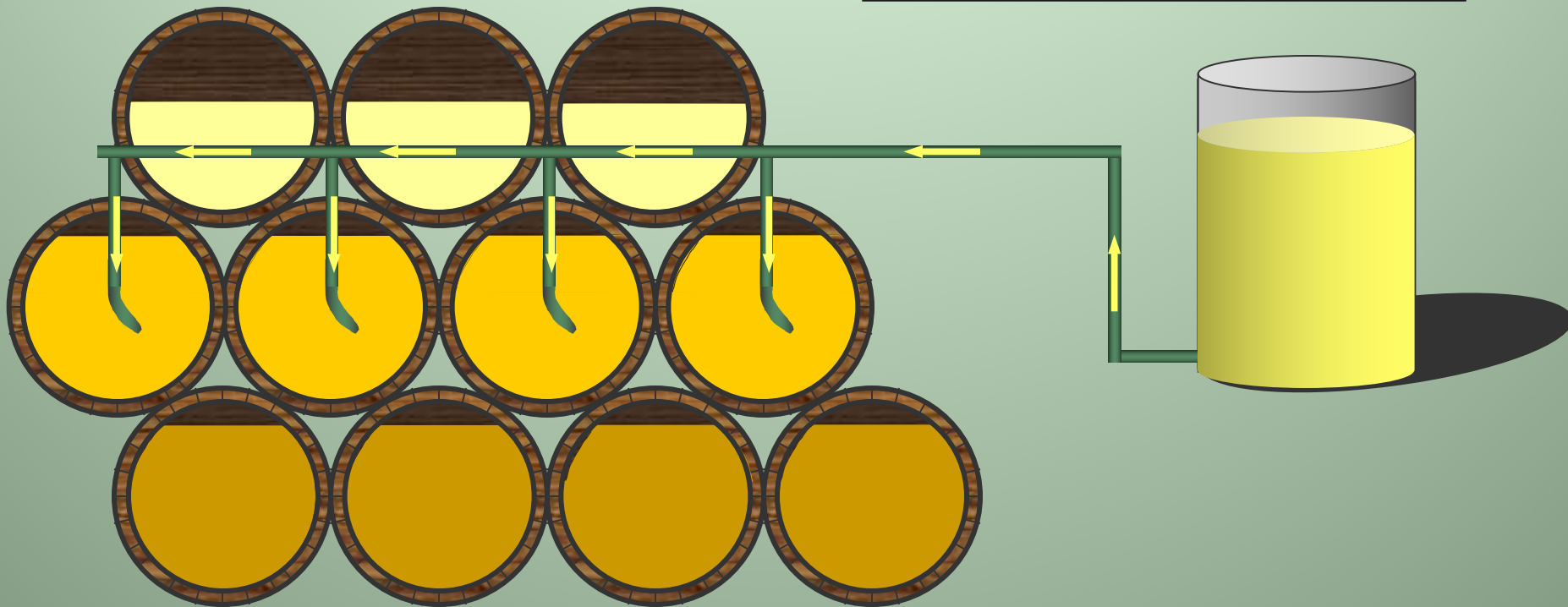
Wine extracted from Criadera to be used in blending to 1<sup>st</sup> solera scale.





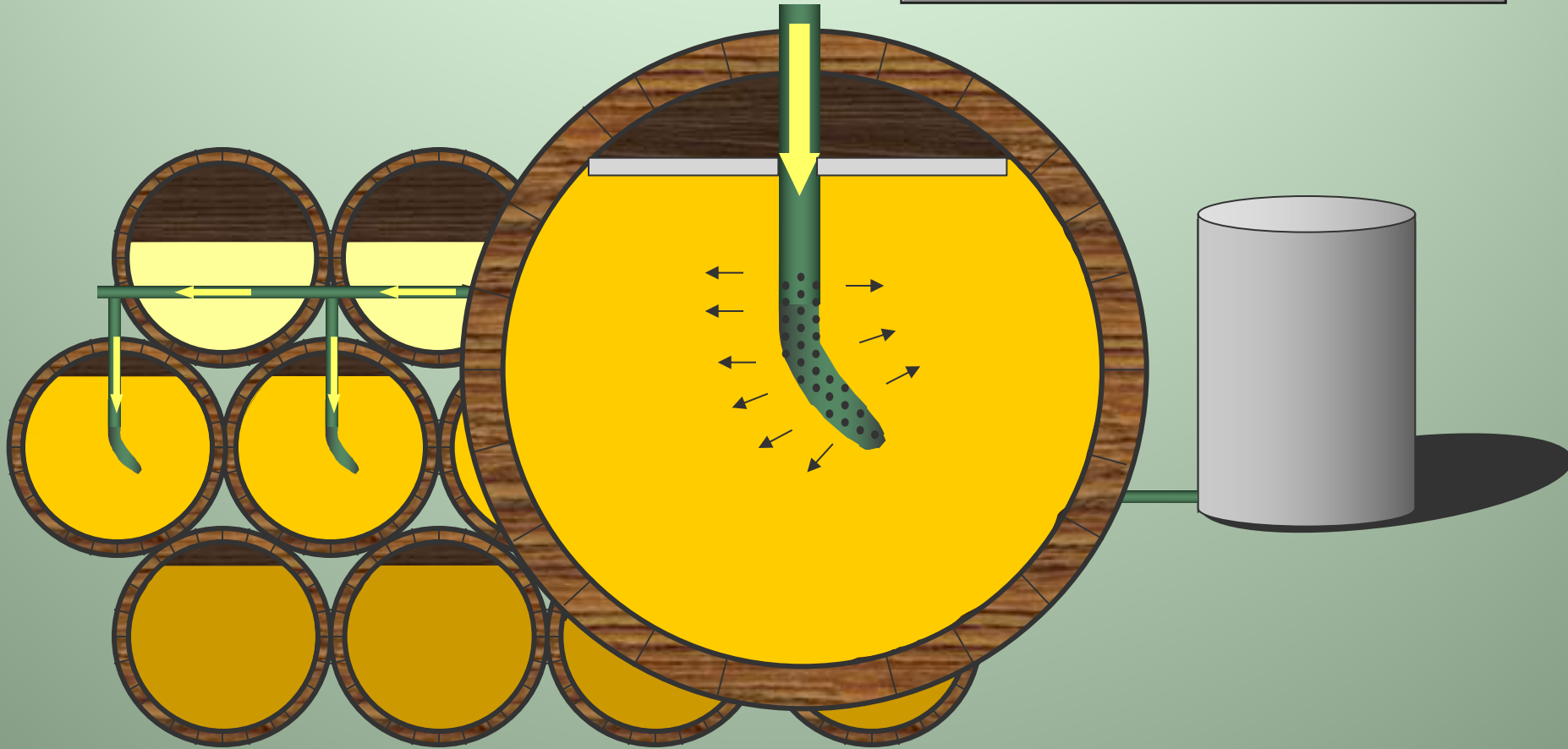
# How does the Solera work?

Wine pumped from holding tank to 1<sup>st</sup> Solera scale.  
Process repeated to other scales of the Solera.  
Allows adjustments to take place. eg. Alcohol

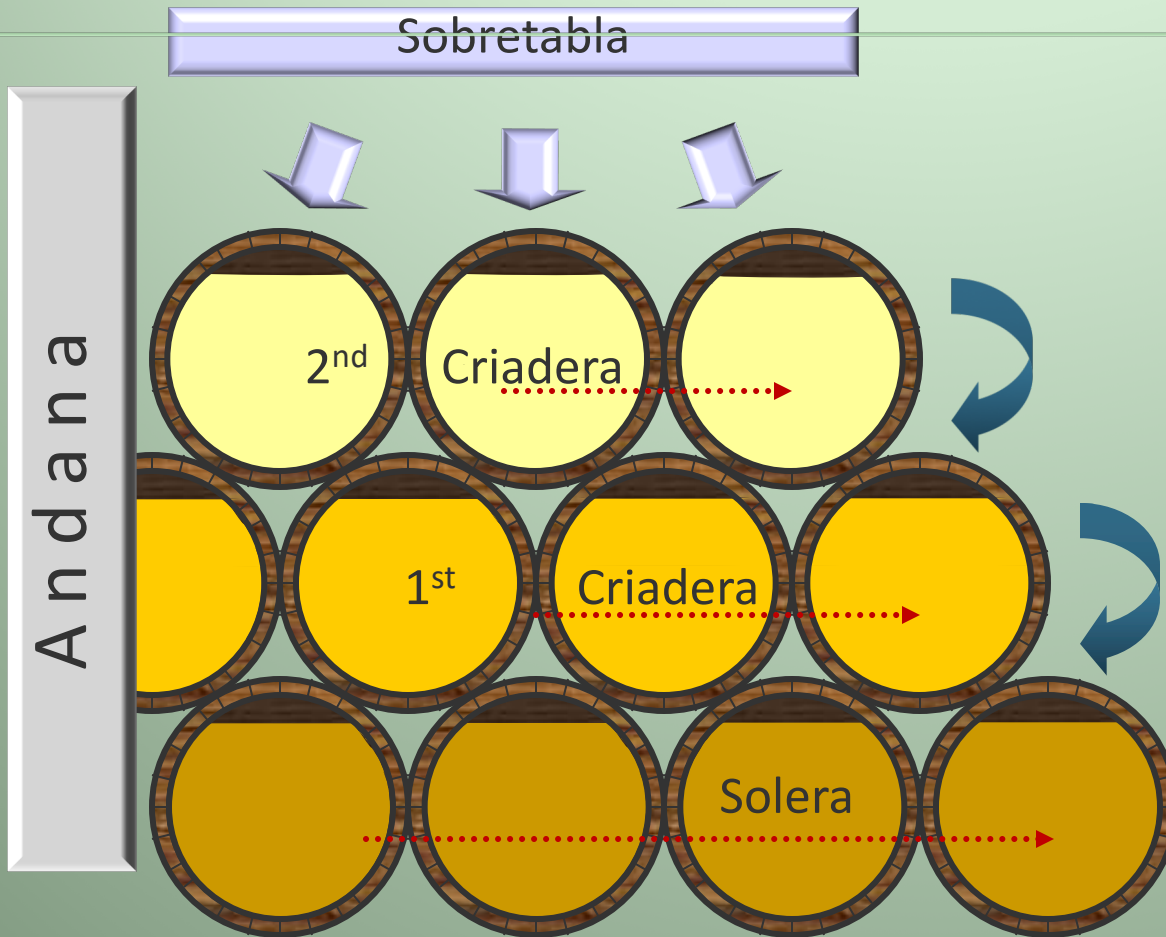


# How does the Solera work?

Special head inserted through the surface of Flor to allow the wine to be pumped in without damaging the Flor.



# How old is this wine?



What determines the average age of the wine?

1. Number of scales
2. Percentage of the “Saca”
3. Frequency of the “Saca”

The combination of these three factors (different for each wine) determines the rotation (R) of the total stock of wine in the system and consequently, the average age of the wine released:

$$R = \frac{\text{Total stock in the system}}{\text{Volume of “sacas” in a year}}$$

Finos / Manzanillas have many criaderas and several Saca per year to give a fresh product to the market. Oloroso normally 1 saca per year.



# Sweetening and Colour Agents

## **Pedro Ximenez**

- ✦ Most important sweetening agent .
- ✦ Grapes dried in Soleo process to increase sugar from approx 23% to 43-54%.
- ✦ After pressing must is run into casks containing grape spirit.
- ✦ Wine left for approx 9 months.
- ✦ Slight fermentation raises alcohol by 1°.
- ✦ Fortification to raise alcohol to 13%.

## **Dulce Pasa**

- ✦ As PX but using Palomino grape. (can achieve 50% sugar)

## **Dulce de Alimbar**

- ✦ A combination of Glucose and Laevulose blended with Fino and matured.
- ✦ Used to sweeten pale cream sherries.

## **Sancocho and Arrope**

- ✦ Dark coloured sweet non alcoholic syrup produced by reducing grape must to 1/5 of its volume over heat.
- ✦ Used in production of Vino de Color.

# Sweetening & Colour agents

## Color de Macetilla

- The best Vino de Color made by blending 2 parts Arrope with 1 part grape must.
- A violent fermentation results and the finished wine has 9% alc. and 235 gr/ltr. residual sugar.
- Wine is matured in a Solera.

## Color de Remendado

- Cheaper and more commonly used vino de color made by blending Arrope or Sancocho with local wine.

# Sherry styles.

## Vinos

### Vinos Generosos

Dry (Max 4gr/ltrRS)

Manzanilla  
Fino  
Amontillado  
Oloroso  
Palo Cortado

## Vinos Dulces Naturales

Sweet

Pedro Ximenez  
Moscatel  
Dulce

## Vinos Generosos de Licor

Blended

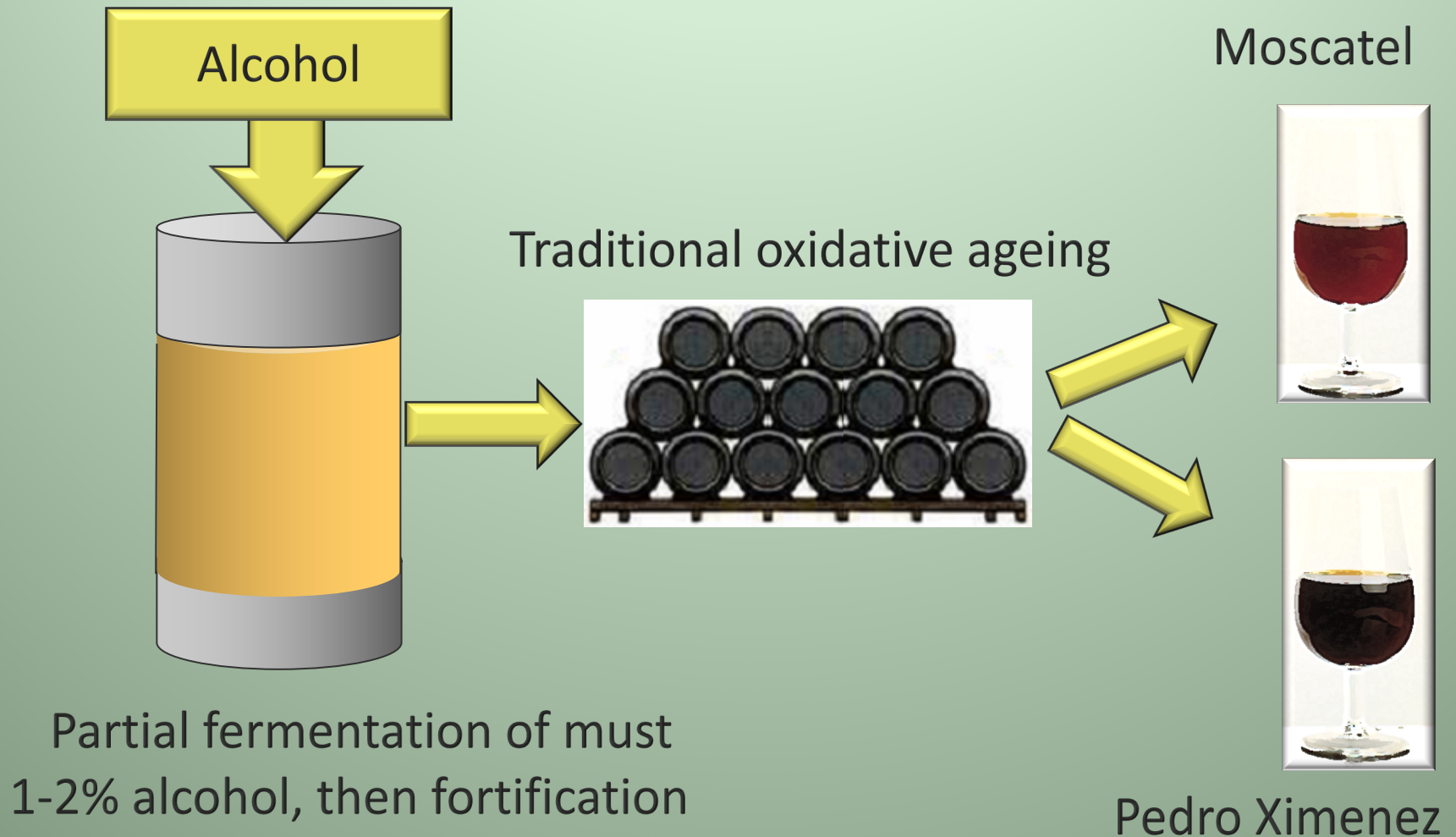
Limit between "Pale Dry" and "Pale Cream", as well as between  
"Medium Dry" and "Medium Sweet", will be 50 grams per litre RS

Pale dry  
Medium  
Pale Cream  
Cream

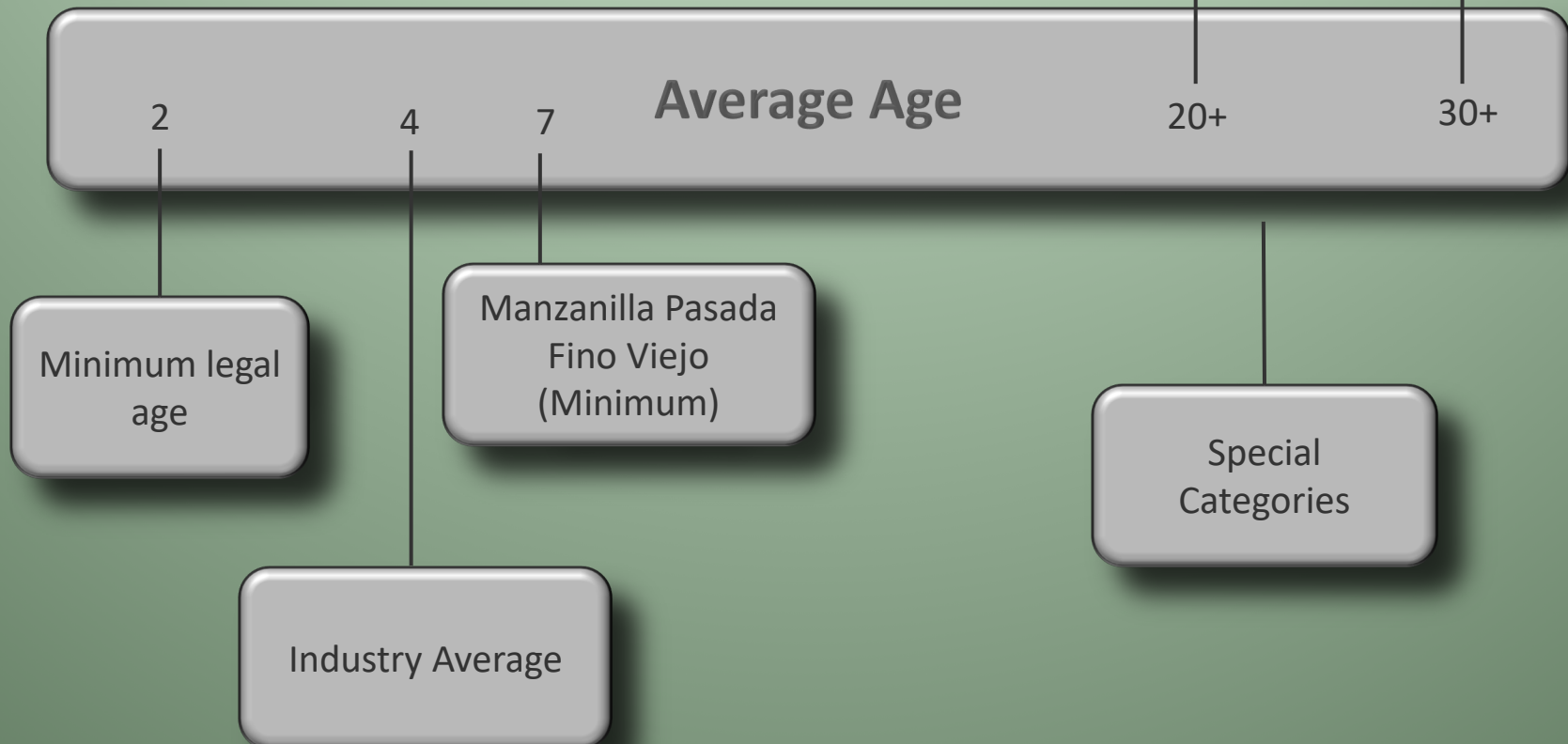
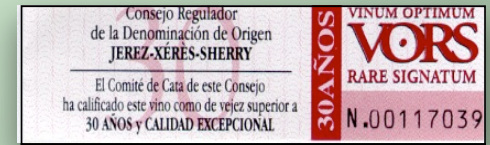


# Natural Sweet Wines

## Vinos dulces naturales



Sherry age-reference is always related to average ageing.  
Average age calculated in years as  
vintage + number of years in Solera.



# Sherry Styles

## **Manzanilla de Sanlúcar: (Manzanilla D.O.)**

- ✦ A dry style of Sherry produced with biological ageing.
- ✦ Grapes can be sourced from Sherry D.O. but production only in Sanlúcar de Barrameda. Minimum 2 years ageing
- ✦ Wines must be fortified.

## **Manzanilla Pasada:**

- ✦ A Manzanilla with Amontillado characteristics after a minimum of 7 years maturation..

## **Fino:**

- ✦ Dry wine that develops beneath the growth of Flor in the Bodegas of Jerez, & Puerto de Santa Maria.

**Fino Viejo: (Fino Antiguo)** – minimum 7 years ageing.

## **Fino Amontillado:**

- ✦ A Fino that is beginning to lose its Flor but has not reached the Amontillado stage.



## **Amontillado:**

- A true Amontillado is a Fino that has been left in cask without refreshment.
- The Flor dies and sinks to the bottom of the cask exposing the wine to the effects of oxidation.
- Minimum 4 years ( 2 years biological ageing + 2 years oxidative ageing)
- Amontillado is a dry, nutty wine but some are sweetened and sold as commercial medium sherry.

## **Palo Cortado:**

- A wine that started life as a Fino, left to develop as an Amontillado but became deeper in colour with characteristics of Oloroso.
- Classified as Dos, Tres or Cuatro Cortados according to age.

## **Oloroso:**

- After first classification the wine may be fortified to 18% in order to prevent flor growth. Wines with natural alcohol permitted.
- The Bota are left in the open to mature. Excess oxidation and evaporation takes place giving the wine a baked character.
- The style is rich with a raisin like finish.
- True Oloroso is always dry.

## **Cream:**

- A Dark rich Oloroso blended with sweetening and colouring wines.

## **Brown:**

- A sweet wine blended from Oloroso and Raya sherries
- Darker and richer than Cream.

## **East India:**

- Rich sweet sherry (now a brand) but originally matured on long sea voyages.

## **Almacenistas:**

- This is a single Solera Sherry, bottled unblended.
- Only small quantities are available mainly in Fino, Manzanilla and Amontillado styles.

## **Añada:**

- Vintage dated Sherries.

## **En Rama:**

- Rama means 'raw'. (Regulated term)
- A young, Fino/ Manzanilla made from unfiltered and unclarified wine taken from the cask in spring when the Flor is at its thickest.
- With no stabilisation the Sherry must be drunk within three months of bottling.



# Age Dated Sherry

## **VORS - Vinum Optimum Rare Signatum:**

- ✦ Very old rare Sherry
- ✦ Minimum age 30 years

## **VOS - Vinum Optimum Signatum:**

- ✦ Very old Sherry
- ✦ Minimum age 20 years
- ✦ Bottles may be labelled with words, initials, age, or all 3.
- ✦ More recently designations for 12 and 15 Years Old were introduced to apply to Amontillado, Palo Cortado and Pedro Ximenez styles.



# Añada: Vintage dated Sherry.



- Regulations of the Denomination of Origin allow the use of the Añada, (vintage) system.
- A system in which Sherries from a specific harvest are aged separately and not blended with wines from different years.
- The Botas are sealed by the Consejo Regulador, limiting the circulation of air inside the cask to stop the yeast "breathing".
- The Consejo Regulador guarantees that the wine has been stored without the possibility of manipulation, unless carried out under the control of the Consejo Regulador.
- It is required to keep the wine in wooden Bota or glass Bocoys, sealed and under the supervision of the Consejo Regulador.