

By Margie Carter



PARAFIELD OLIVES YARRAGUNDRY WAGGA WAGGA

Power Point By Clayton Baumer

# 1. Natural Non-Caustic Fermentation Method of Debittering Olives by Margie Carter



## 2. VARIETIES? COLOUR? SIZE?



ALL OLIVES CAN BE TABLE OLIVES BUT!!!!????

Decide the Variety, Colour & size for You Market  
Green Olives are consumed more than Coloured Olives  
Kalamata are the most popular Coloured Variety  
Size does matter when selling Table Olives

There is a small market for smaller olives such as Bouquet Bars & Medleys



### 3. HARVEST-Picking—HANDLE CAREFULLY



GREEN OLIVES are ready when the Olives change from Grassy green to a lighter green.



Don't leave too long as they lose their structural integrity



MATURE DARK OLIVES-Brown, Pink, Magenta, Purple,  
Dark Purple



The colour changes on the Skin first then the flesh changes to a creamy green-Cream-Pink-Magenta to Dark Purple colours.

When picked the colours all blend into each resulting in an average colour due to the reduction of the anthocyanins.

The higher the Temp & the more water the faster they ripen

## 4. GETTING READY FOR PICKLING





- Remove Leaves the best you can
- Good HYGENE practices must be adhered to
- Mix well your brine solution of 8-10% depending on the colour
- Lower % for Green Olives & higher for Darker Olives.
- Measure the Salt % with a Refractometer
- ph must be around 4-4.5
- Can carefully mix in Acetic Acid, measure with Litmus paper is fine.



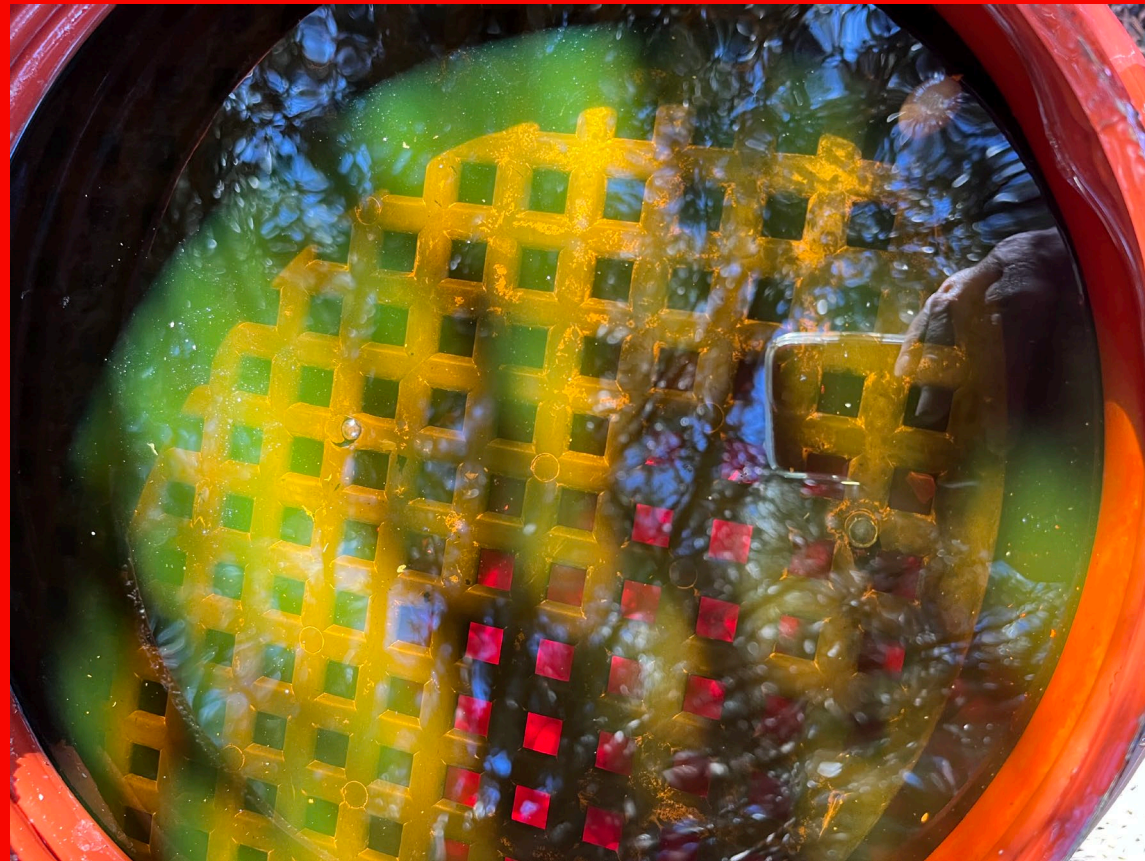
## 5. INTO CONTAINERS





-Pour your Brine into your Drums first for a softer landing of your Olives.

-Pour Olives into Brine, then more Brine & so on until the Drum is nearly full then put in a slotted disk to keep the Olives under the Brine-Very important!!





- Continue to FILL to the BRIM- DO NOT ALLOW ANY AIR SPACE to keep the Microbiology stable for fermentation & stop the Olives going soft from gram negative bacteria.
- Lid on tight THEN top up with brine weekly-fortnightly & so on for the whole time you have them in your drums- Months to Years.
- Monitor the Salt % & ph.  
60% Olives 40% Brine

## 6. FERMENTATION-TAKES 3 MONTHS



-Debittering is the removing of the phenol, oleuropein (water soluble) through the semi-permeable skin membrane and the micro-organism, Lactic Acid Bacteria (*Lactobacillus plantarum*) dominates and performs the fermentation.

-Lactic Acid Bacteria is a natural preservative & with the Salt your Olives are preserved for a very long time, years in fact.



- Leave with repetitive monitoring for 8-9 months
- Left another 3 months & the Olives taste even better
- Watch for any odours that are unpleasant -this is Irreversible & most be thrown out. Zapateria smells like Faeces
- Can be kept like this for years-especially in case of drought!!
- Optimum Temp 19-27 C

# 7. DECANTERING for MARKET



- Olives may be then decanted into saleable vessels as soon as they are edible or at your leisure
- Olives now can be sorted into sizes if required
- Olives are then sorted by hand or machine (my machine is called Clayton!! :) sorting holes (from birds), splits or any other spoilage.



- Olives are then de-canted into a lower concentration of brine usually 4-6-8% depending on the saltiness of your olives or the requirement of your customers. Olives need to be over a 4-6% brine when finished.
- Unpasteurized in Buckets or Pasteurized in Bottles

## 8. PROBLEMS



- Wilted, Bird pecked or diseased fruit
- Brine not fully mixed
- Brine too salty -Green Olives the skin shrivels
- Brine too less Salt- Gram negative bacteria
  - Dark Olives form air pockets in Fruit
- ph wrong = disaster- Gram negative bacteria
- Unhygienic implements, Drums, hands or fruit (off ground)



## 9. WHAT YOU NEED



- Patience
- Join AOA
- Good healthy Olive
- Markets
- Salt
- Refractometer
- Good Safe Water

- Containers – You can buy second hand drums readily
- A good mixer to mix the brine fully
- Containers to mix in- Drums
- Acetic Acid
- Litmus Paper
- Labels
- Logos

## 10. OPPORTUNITY for IMPORT REPLACEMENT MARKET in AUSTRALIA





- Australia - Consumes 22,000 Tons p.a.
  - Producers 2,000 Ton p.a. (Tree Tops 1,000 p.a.)
- IMPORTS -18,000 Ton p.a.
  - From GREECE 10,000 Tons
  - SPAIN 4,000 Tons
  - ITALY 1,000 Tons
  - TURKEY 1,000 Tons