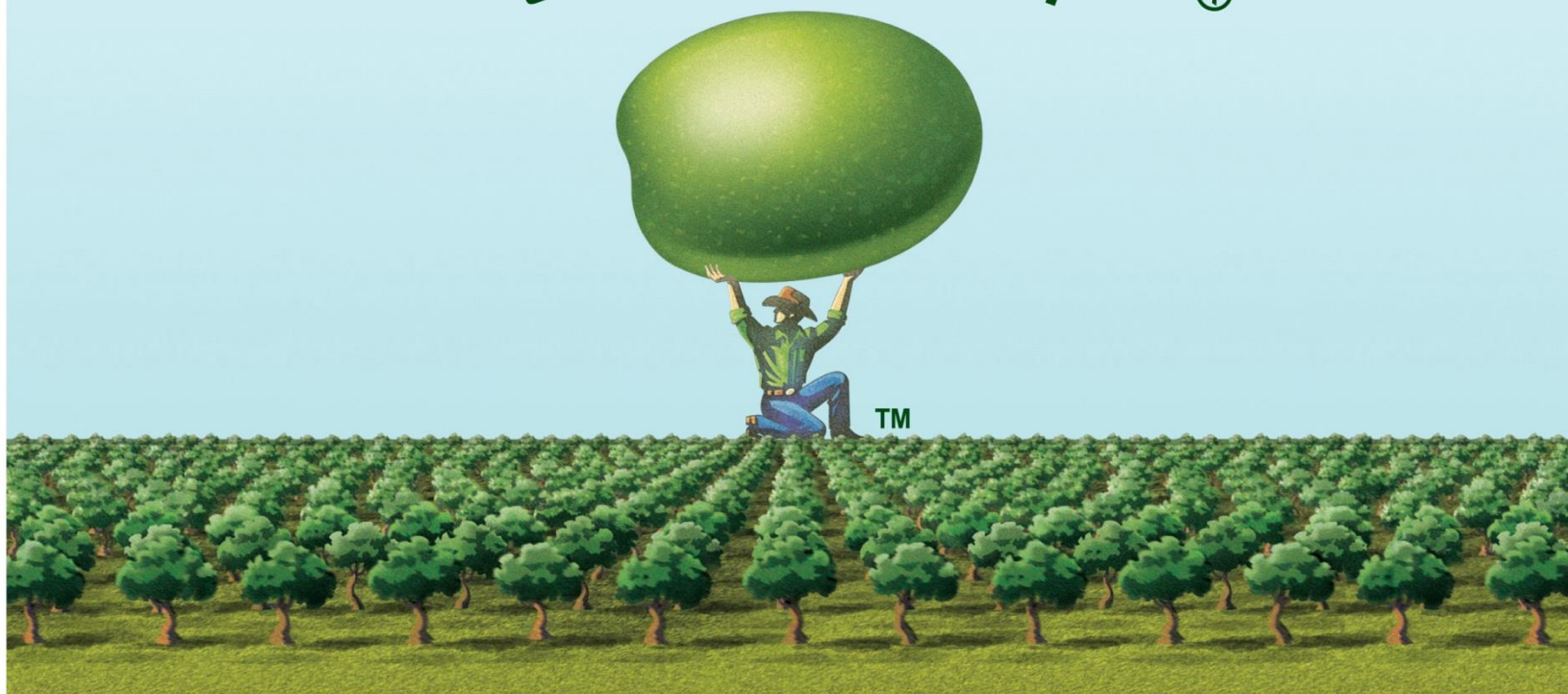


# CALIFORNIA<sup>®</sup>

OLIVE RANCH



# Field Notes on Oil Quality

Brian Mori

Field/Grower Manager  
California Olive Ranch



# “Mummy” Effect on Oil Quality





# What is a “Mummy”

- Dehydrated olive remaining from previous year's crop
- Extremely acidic property
- Similar overall density as a normal olive
- Difficult to determine threshold in the field
  - =>5%

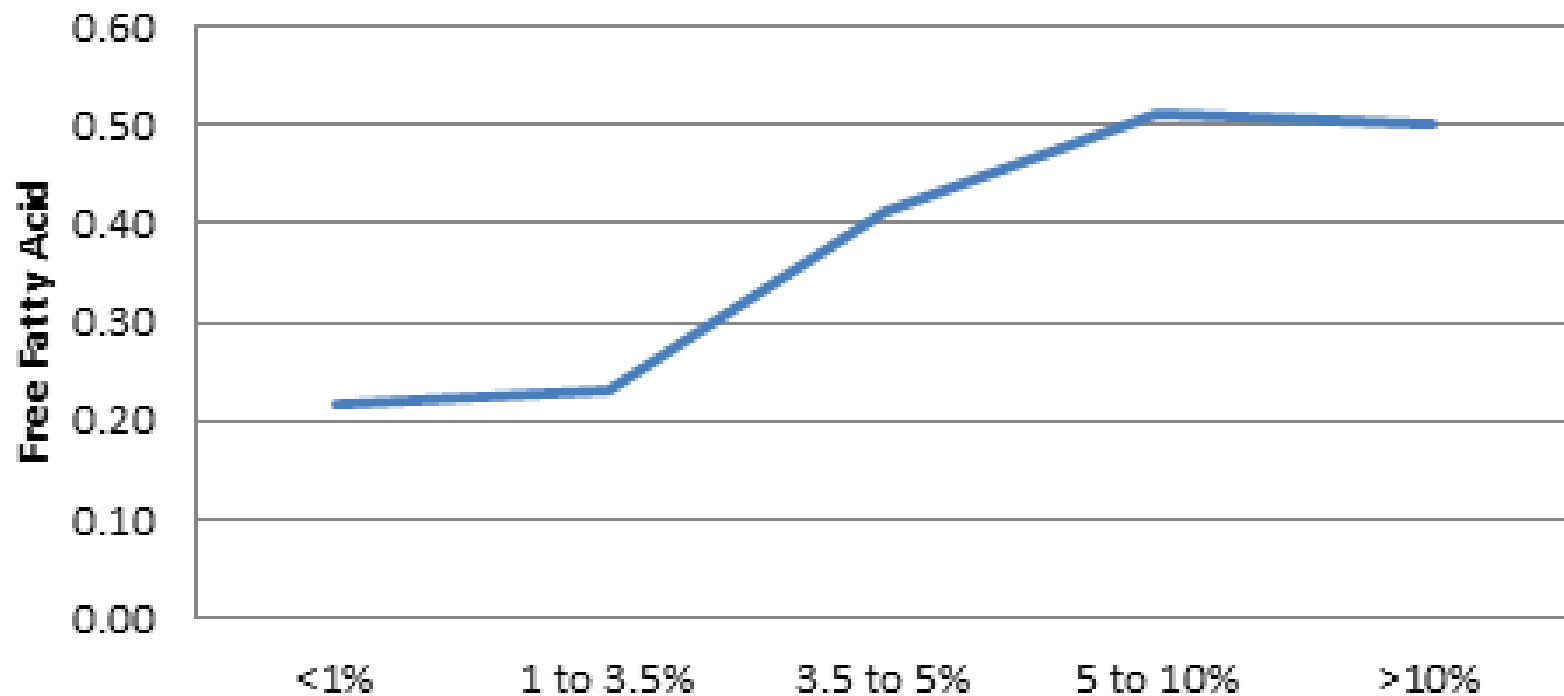


# Effect of Mummies

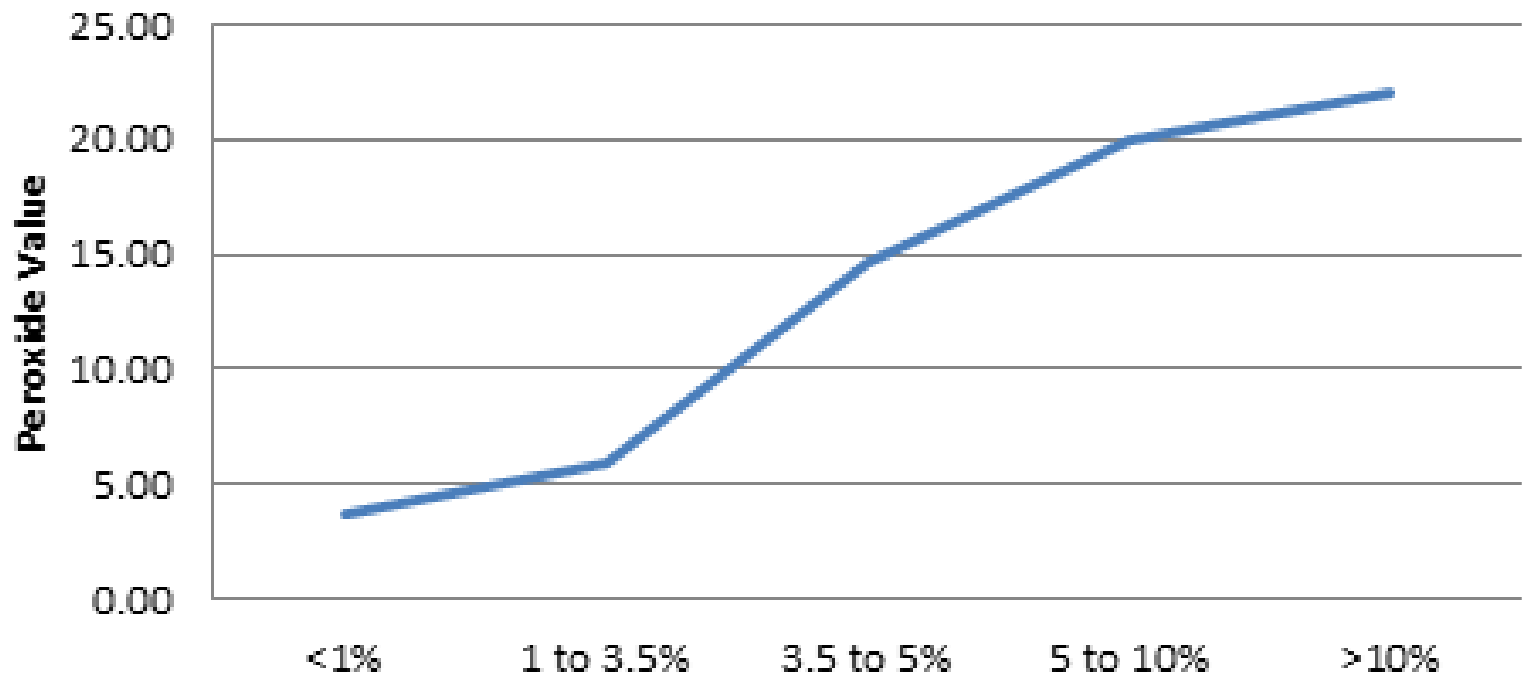
- Between 3-5% can affect chemistry
  - FFA
  - PV
- As the percentage of mummies increase, acidity content also increased and overall moisture content decreased
- Creates sensory defects
- Concentration of over 5% results in high acidity and a non EVOO product
- Significant concentrations of fruit left from a previous season will affect final oil quality



# Mummy % Correlation to Free Fatty Acid



# Mummy % Correlation to Peroxide Value



# Harvested Fruit with Mummies





# Causes of Mummies

- Varietal (Removal)
  - Koroneiki
  - Arbosana
- Pruning
  - Poor Structure limits removal
  - Efficacy of the harvester
  - End row trees
- Ineffective harvesters
- Lack of adequate winter storms
  - Early freeze
  - Arid winter
  - Wind storms

# Progression of Damage



# Browning and Discoloration



# Fruit Shriveling Following Freeze Event (Duration 4+ Hours)





# Varietal: Arbosana



THE NEW TASTE OF FRESH™

# Proactive Field Measures

## Hand Removal

- Time consuming and expensive
- Not always effective in removing enough mummies to clear threshold
- Difficult to target areas of concern

## Second Winter Shake

- Most effective
- Used in more prone varieties
- Not an option in traditional
- Must have dry conditions
  - Creates more leaf abscission and scarring
  - Olive knot

# Effects of Freeze Damage (Olive Knot) 2012-2013 Seasons



# Olive Knot and Excessive MOO

- MOO= Material Other than Olives
- Excessive olive knot in orchard fractures during harvest
- Sorters in standard milling line unable to keep up with volume

## Effects:

- Sensory defects
- Elevated Chemistry
  - Peroxide Value





# Milling and Sorting Options



- Color Sorter
  - Lease options
  - Different sizing options
  - Calibration to fruit conditions



# Removed by Color Sorter



# Ag Web Chain Removal

- Olives pass through slots onto alternate conveyor
- Larger debris carry to end of conveyor
- Utilized in many nut processors
- Custom availability and throughput to suit operation

