



Oak Alternatives: A Modern Approach for Oak Ageing

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WEBINAR FORMAT

- Write down questions during presentation, save them until the Q&A at the end
- For technical difficulties, use chat box #2
- Recording in progress!

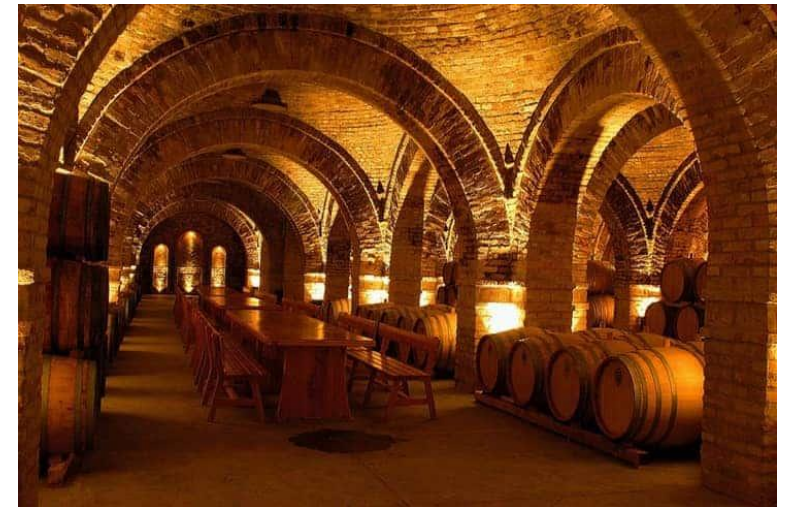


OVERVIEW

- Why we use oak barrels
- Why consider alternatives
- Alternative options
- Alternative approach to oak aging
- When to use alternatives
- Analysis for Oak
- Q & A

WHY USE OAK BARRELS?

- History
- Tradition
- Extraction of Flavors or tannin from the oak
- Oxygen ingress
- Color stability
- Aesthetics





WHY CONSIDER ALTERNATIVES?

- Cost
 - Capital investment, labor, topping wine
- Space
- Product consistency
- Quality control
- Sanitation
- Sampling

On labor with oak barrels:

*"you can do it once in a tank, or
you can do it 300 times in barrels."*

*Mike Robustelli of McManis Family
Vineyards*



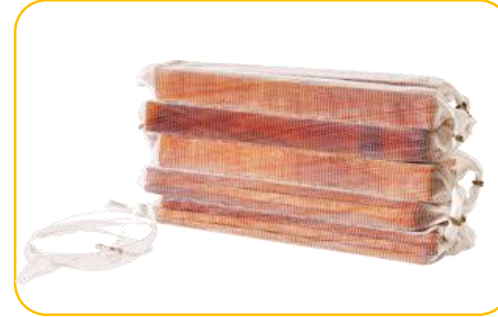
ENARTIS ALTERNATIVE OPTIONS



Oak chips
(Incanto)



Tannin
or
Oak Blends
(Incanto NC)



Barrel
Inserts
(Barrel
Boost)



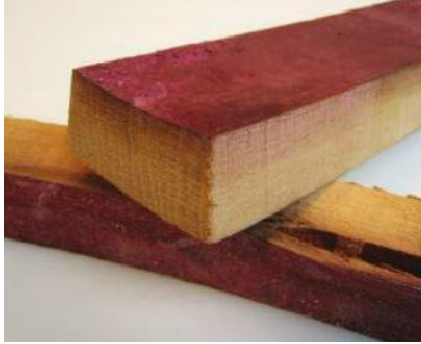
OAK CHIPS

Attributes

- Easy to use
- Low cost
- Quality consistency
- Bench trial applicable
- More flexibility
- Faster extraction time



SURFACE AREA COMPARISON



- Only small fraction of oak contributes to flavor / aroma / permeation
- Surface area in contact with wine minimal



- High Surface area
- Higher extractability
- Less oak required
- Faster Extraction
- Less wasted product



OAK WEIGHT COMPARISON



50 Kg barrel

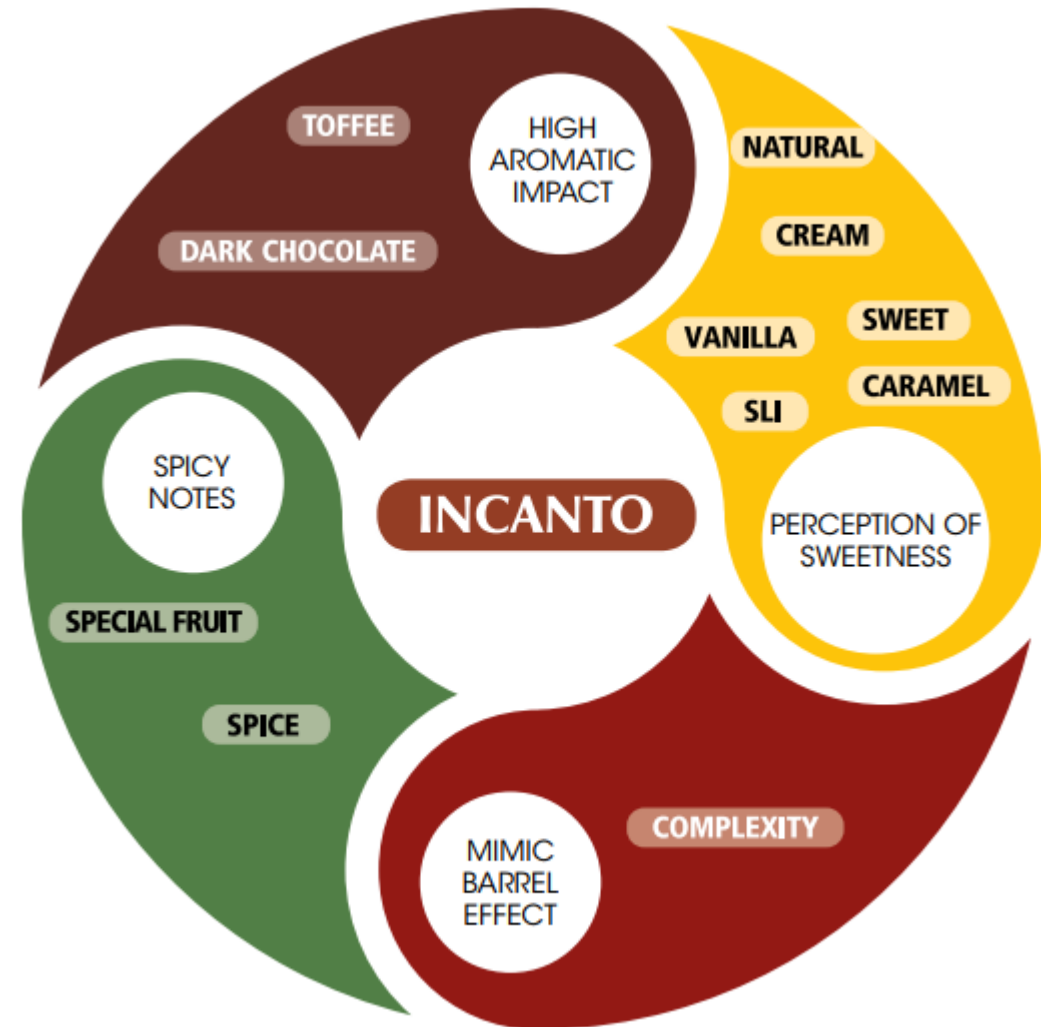
OR



New barrel
equivalent
dosage rate in
225 L = 1.35 Kg

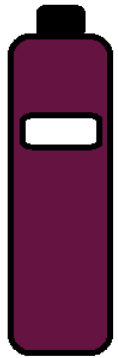
INCANTO

- Unique/Original Toasting process
- Consistent toasting
- Wide range of toasting options
- Call Enartis to request samples!





BENCH TRIALS WITH CHIPS



4 weeks



500 mL sample volume
+ 2 g/L dosage
= 1 g chips / bottle

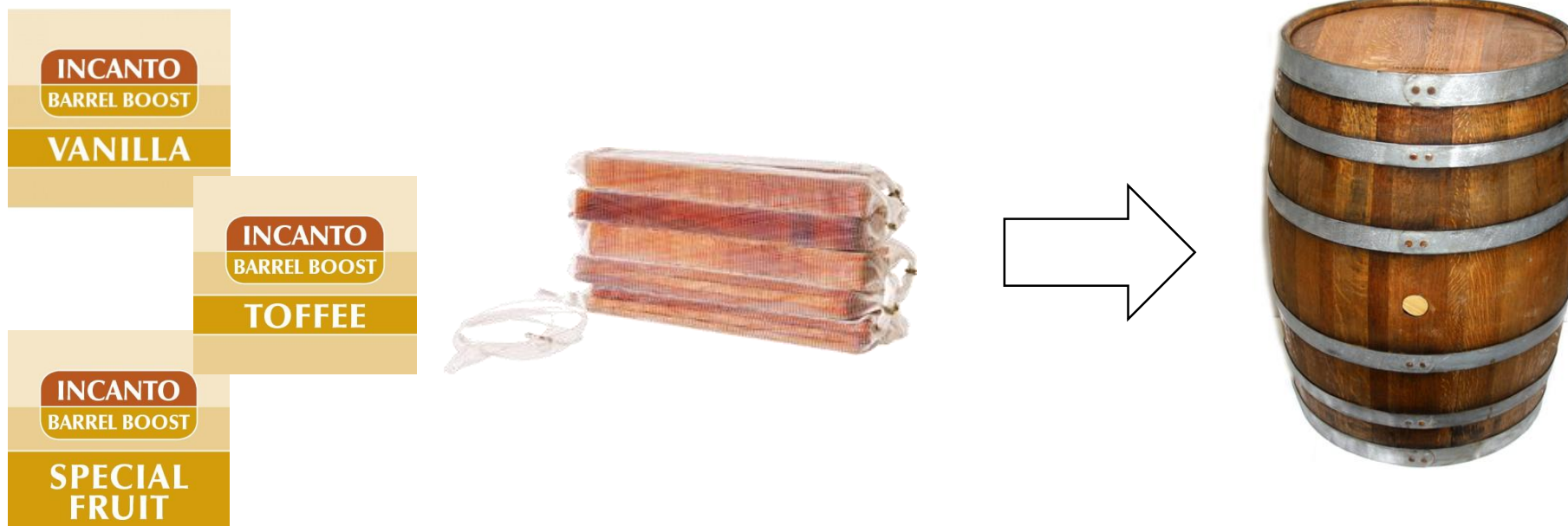
- Tasting oak profiles
- Find optimal oak blend
- Proportional volume to chip % blend

WHAT TO DO WITH USED BARRELS





INCANTO BARREL BOOST



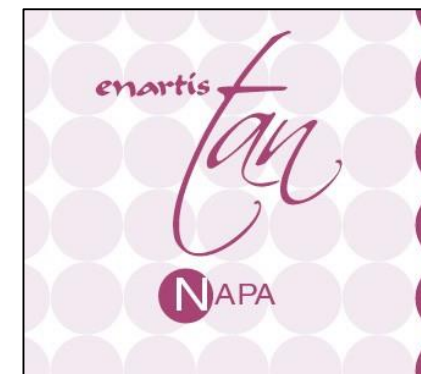
- Add to used barrels
- One barrel boost = 25% new oak barrel equivalent
- Faster extraction of oak flavors than new barrels
- Can fine-tune oak extraction without transfer
- Extend lifetime of barrels in the winery



OAK TANNINS

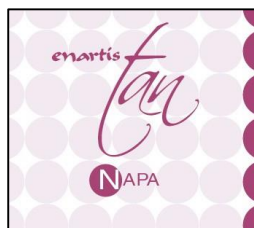


- Extracted from US/ FR oak sources
- Seasoned oak
- Various organoleptic properties
- Multi-purposed
- Easy-to-use
- Bench trial applicable
- Cost effective



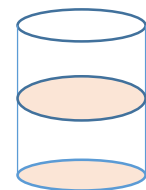


TANNIN TRIALS

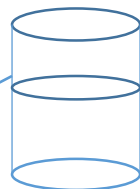


1 g tannin

13%
ethanol or
wine



100 ml



$5 \text{ g/hL} = 625 \mu\text{L}$

$7 \text{ g/hL} = 875 \mu\text{L}$

$10 \text{ g/hL} = 1250 \mu\text{L}$



100 mL wine



100 mL wine



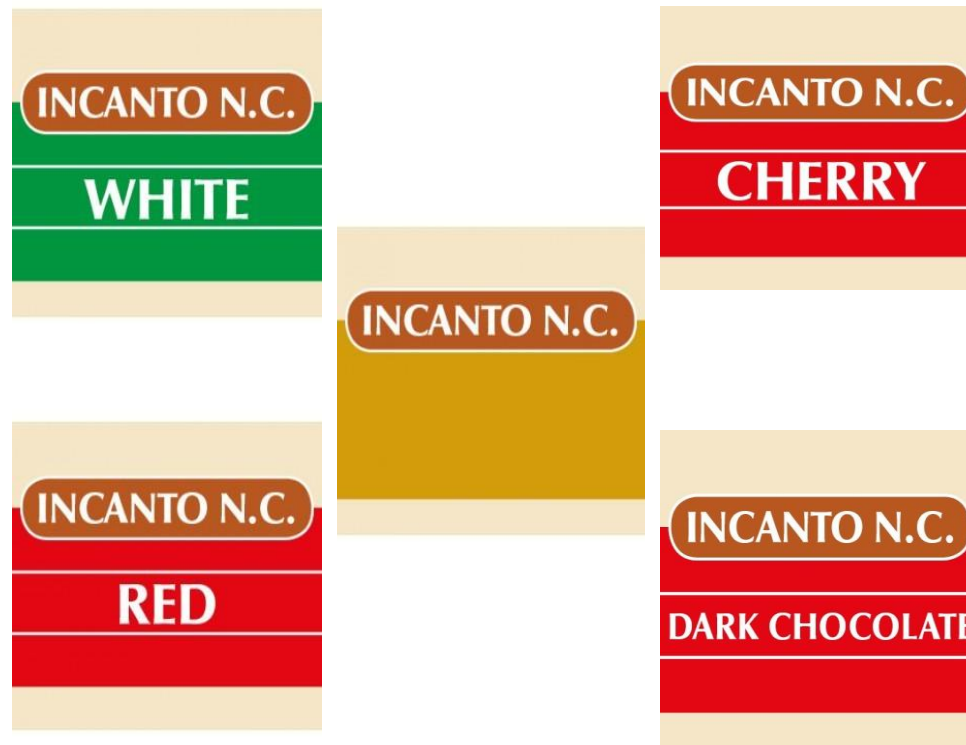
100 mL wine



INCANTO N.C.- SOLUBLE OAK

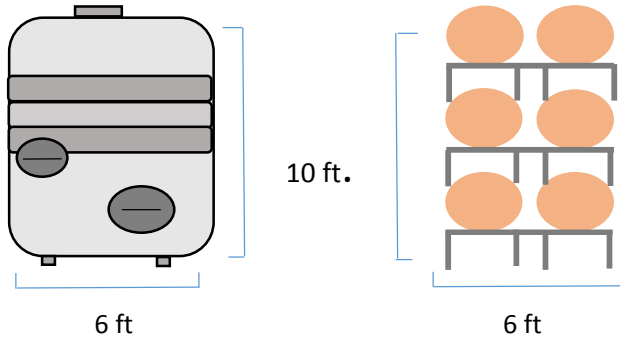


- Easy-to-use
- Soluble oak extract
- Antioxidant
- Improves color stability,
- Enhances structure
- Aromatic improvement
- Precise dosing
- Lower dosage required (1/10)
- No solids to worry about
- No loss of color by surface adsorption

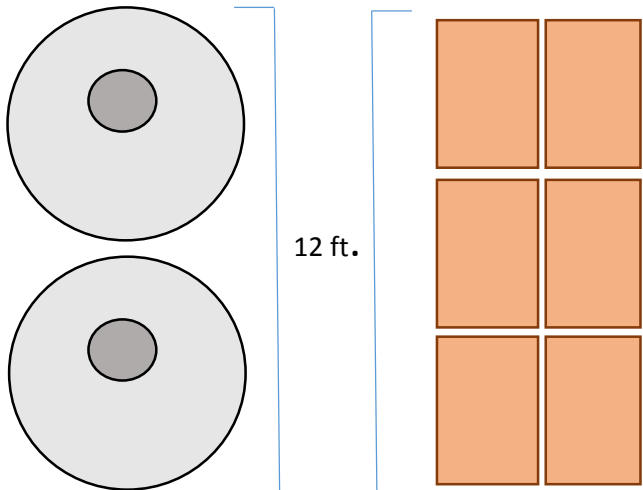




VOLUME CONSIDERATIONS



Front view



Top view

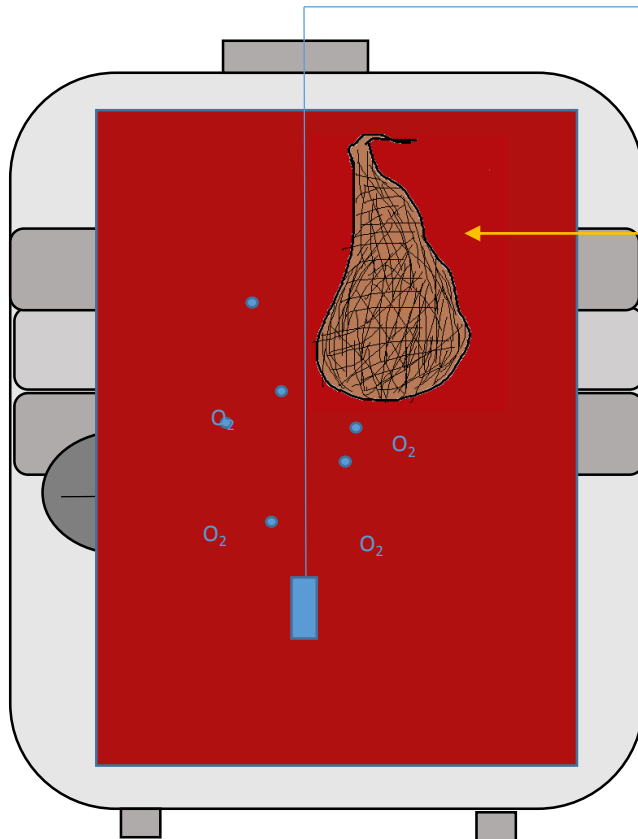
Volume / sq ft comparision

2 x Tank = 4218 gals

18 barrels = 1080 gals



MICRO-OX & OAK ALTERNATIVES



INCANTO CHIPS

NATURAL

INCANTO

SPICE

INCANTO CHIPS

SPECIAL
FRUIT

Surli
one



NEW MICRO-OX UNIT!

WIN-Q-OX

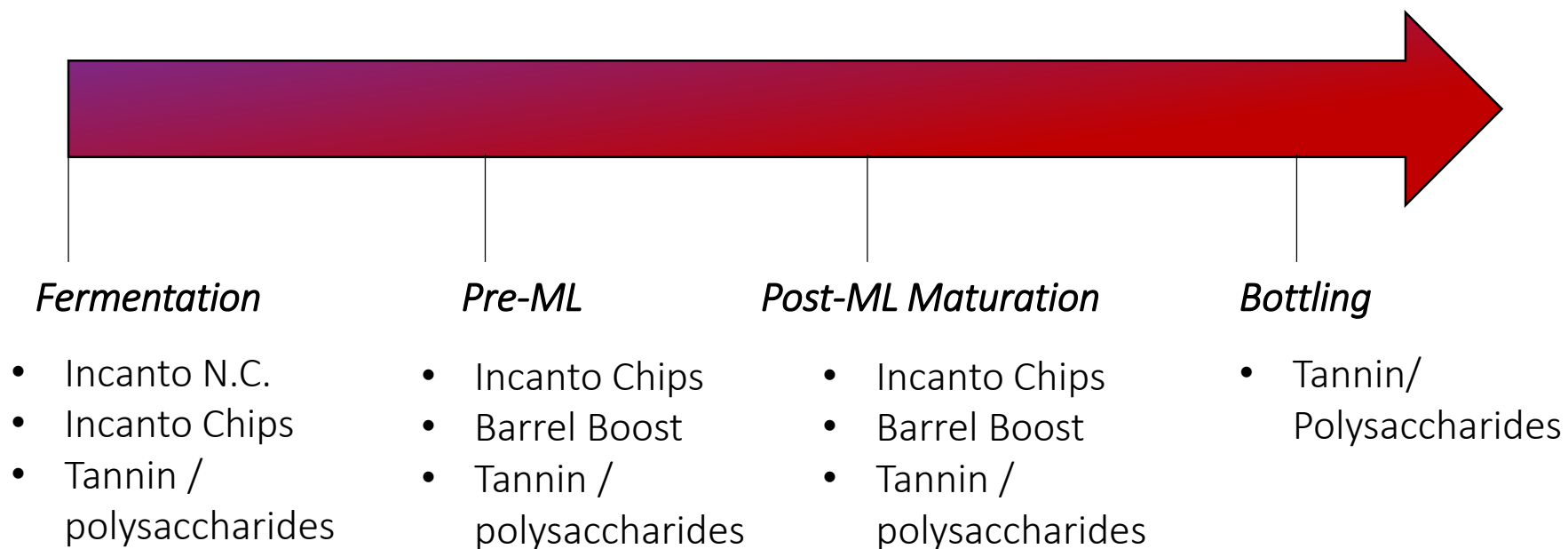
Batches			
Batch ID	20180801000000000000	Batch Name	001-001-001
Version	2018	Batch Size	10000
Operator	00000000000000000000	Batch Status	001-001-001
Task ID	001	Batch Type	001-001-001
Batch Size	10000	Batch Date	001-001-001

MicroOx

- Wireless integration
- WIFI capable
- IP65
- Programmable
- Large touchscreen
- Downloadable batch data
- Made in USA



OAK ALTERNATIVE APPLICATION



Recommended contact time

Incanto Chips	Barrel Boost	New Oak Barrel
4 weeks	4 - 6 months	12 - 24 months

OAK AROMA COMPOUNDS ANALYSIS

GCMS

Lactones (cis and trans) – coconut

Vanillin - vanilla

Furfural – bready/nutty

5-methylfurfural – spice/maple

4-methylguaiacol – smokey/spicy/leather

Guaiacol – smokey

Eugenol/ Isoeugenol – spice/ clove



VINQUIRY
LABORATORIES
by enartis USA

Applications:

Barrel selection, oak materials usage,
benchmarking, blending decisions



OAK COST COMPARISON

Cost/vintage	\$/gal	\$/hL
New barrel	14 - 20	350 - 500
Neutral barrel	1.5 - 4	40 - 100
Incanto Chips (3 g/L)	0.15	4
Incanto Chips (10 g/L~100 % new oak)	0.5	13
Incanto Barrel boost (25 % new oak)	1.5	38
Incanto Barrel boost (100 % new oak)	7.5	190
Tannin	.14 - .26	3.5 – 7
Tannin + Polysaccharides	.25 - .37	6.5 - 10

“We have taken the savings and poured it back into our growers in buying high quality fruit for these programs”

Corey Beck
Winemaker, Francis Coppola Winery



THANK YOU FOR YOUR PARTICIPATION!

- Thank you for your participation!
- Please fill out our survey!
- Useful downloads
- *More useful info and webinar videos @*
<http://www.enartis.com/us/focus-on>
- Now, 20 minute Q&A!
- To reach the Enartis team:
- Call: (707)838-6312
- Email: Jasha.Karasek@Enartis.com

