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## HIGH YIELD VINEYARDS

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Building wine structure and mouthfeel to increase its complexity, ageing ability and overall quality. Higher yield vineyards tend to produce grapes with low phenolic concentration, low color intensity, light structure, low aromatic precursors, some green characters and higher sensitivities to oxidation and color loss. This protocol focuses on:

- Improving extraction of phenolic compounds, polysaccharides, and aromatic precursors
- Boosting aromatic production
- Increase wine stability

### ESSENTIAL STEPS

1. Control any spoilage microbes as early as possible with SO<sub>2</sub> and bio-protection with **Excellence B-Nature**. **Excellence B-Nature** – non-Saccharomyces yeast, pure *Metschnikovia pulcherrima*, non-fermentative. It inhibits the development of spoilage microbes such as other non-Saccharomyces, and bacteria on grapes and juice. Excellence® B-Nature® is an organic anti-microbial solution, used as alternative to SO<sub>2</sub> on grapes. It protects grapes/juice from microbial contamination during transport and processing, does not inhibit Saccharomyces cerevisiae, and reduces SO<sub>2</sub> combining compounds production, thus increasing SO<sub>2</sub> efficiency. Excellence B-nature can be added directly to grapes, without rehydration. Simply sprinkle the yeast on the top of the grapes at picking.
2. Improve color stability, reduce loss of phenolic compounds from harvest by binding and removing proteins with sacrificial tannins such as **Pro Tanin R**. **Pro Tanin R** – Pro-anthocyanidin tannin, use as sacrificial tannin. Developed for application on red grapes, to scavenge oxygen radicals, inhibit oxidative enzymes such as laccase and PPO and eliminates reactive proteins, thus protecting grape polyphenols. It is instantaneously soluble, simply sprinkle it on the top of the grapes at harvest.
3. Increase extraction of skin compounds with pectinase such as **Oenozym Crush Red**, focusing on extracted phenolic compounds, polysaccharides and aromatic precursors. **Oenozym Crush Red** - Extraction enzyme, containing pectolytic, cellulase, and hemicellulose activities to hydrolyze the thick cell walls of the skin, and facilitate the release of phenolic compounds and polysaccharides, thus improving color intensity and stability. Oenozym Crush Red is highly active and fully purified of both cinnamyl esterase (which produces substrates for volatile phenols formation by Brettanomyces) and anthocyanase (which cleaves the glucose moiety from anthocyanins, reducing color stability).
4. Boost aromatic production with yeast producing esters and acetates such as **Excellence DS** and with specific yeast nutrition. **OptiEsters**, yeast nutrient, amino acids and ergosterols selected to increase the production of esters, acetates and ethylesters, thus increase red fruits, floral, berries notes. It increases the sensation of freshness, and balance higher pH wines. **OptiEsters** - Yeast nutrient composed of amino acids and ergosterols selected to increase the production of esters, acetates and ethylesters, thus increase red fruits, floral, berries notes. It increases aromatic complexity, freshness and intensity. Interesting tools to boost freshness and complexity of a wine, as well as compensate for off-aromas.
5. Increase color stability, build up wine structure and mouthfeel with tannins and polysaccharides during fermentation. Promote co-pigmentation and polymerisation with **Softan Vinification** and **Natur'Soft**. **Softan Vinification** – catechins tannins bounded to plant polysaccharides. Added during fermentation, Softan Vinification has a strong ability to stabilize color and protect it from loss during fermentation. It is a gentle tannin that contributes to mouthfeel and build up mid-palate. **Natur'Soft** - preparation of specific yeasts hulls, selected for their high content of polysaccharides. It is strongly effective in color stabilization, as well as filling mid palate and improving mouthfeel. It increases wine complexity, reduces tannins perception, and stabilize color.
6. Build up mouthfeel, reduce green characters and increase aromatic complexity with lightly toasted oak chips during fermentation
7. After pressing, improve wine structure, phenolic stability and compensate the low concentration of skin tannin with the addition of skin tannins such as **Vinitan Advance**. **Vinitan Advance** – pure grape tannin with low phenol content. It improves wine structure while respecting its finesse and balance. Excellent for color stabilization during ageing, it also boosts the fruits aromas and maintain a clean and balance wine profile during ageing.
8. Enhance anti-oxidant protection of the wine during ageing with **Aroma Protect** to reduce redox potential and increase natural wine resistance to oxidation. **Tan&Sense Volume** every racking to protect from oxidation and scavenge oxygen radicals. **Aroma Protect** - inactivated yeasts, naturally rich in glutathione, a natural antioxidant, sulfurous tripeptide with great reductive power. It gives immediate protection against oxidative mechanisms, releasing glutathione (GSH) into the wine, thus slowing down oxidation. **Tan&Sense Volume** – pure untoasted oak tannins, with high capacity to scavenge oxygen radicals, buffer redox potential and maintain wine freshness. It is a gentle tannin, increasing sweetness and roundness perception.

### HIGH YIELD VINEYARD WINEMAKING GUIDELINES

<b>HARVEST AND GRAPE TRANSPORT</b>	<p><b>Pro Tanin R, 150-180 g/ton</b>, at picking or during fruit processing to protect from oxidation and inhibit oxidative enzymes.</p> <p><b>Excellence B-Nature at 30-50 g/ton</b>, sprinkle directly on grapes, as soon as possible after picking to prevent any microbial contamination and spoilage.</p> <p><i>Optional: SO2 at harvest</i></p>
<b>COLD SOAK / MACERATION</b>	<p><b>30 mL/ton of Oenozym Crush Red</b>. Maceration enzyme, purified from cinnamyl esterase and anthocyanase to improve grape skin compounds extraction, and free-run yield. It will also improve clarification and wine filterability.</p>
<b>ALCOHOLIC FERMENTATION</b>	<ul style="list-style-type: none"> <li>- Temperature: 85-88°F</li> <li>- <b>Excellence DS at 20 g/hL</b> to produce fruity, fresh and delicate aromatic profile with smooth structure.</li> <li>- <b>OptiEsters at 25 g/hL</b> to promote the production of ethylesters and enhance fresh, fruity and floral characters.</li> </ul> <p>Rehydrate yeast with <b>OenoStim at 30 g/hL</b> to reinforce yeast activity, increase aromatic production and optimize grape expression.</p>
	<p>AT 1 DAY AFTER INOCULATION</p> <p>Ensure good yeast nutrition and limit off-flavors production with <b>Optiflore O® at 40 g/hL</b> (complete organic nutrient based on inactivated yeast).</p> <p><b>150 - 180 g/ton of Softan Vinification</b> (catechins and plant polysaccharides) to encourage the stabilization of anthocyanins via co-pigmentation and condensation and protect anthocyanins.</p>
	<p>AT 18 BRIX</p> <p>Add <b>20-30 g/hL of OptiFerm</b> (ammonium salts and vitamin B1)</p> <p><b>180 g/ton Natur'Soft</b> (yeast derivatives rich in mannoproteins) to stabilize color, fill mid palate, and increase wine volume.</p> <p>Add <b>3g/L Oenobois OenoFresh Granular</b> (light toast French oak granular) to balance mouthfeel, add aromatic complexity and reduce green characters</p>
<b>PRESSING</b>	<p>Drain and Press when dry or extraction is desired.</p> <p>Add <b>10 g/hL Vinitan Advance</b> (skin tannins) to reinforce wine structure and oxidation resistance, compensate lower concentration of skin tannins and improve color stabilization.</p>
<b>MLF</b>	<p>Co-inoculation: add <b>Oeno1 at 1g/hL</b> 2 days after the yeast.</p> <p>Sequential inoculation: add <b>Oeno1 at 1g/hL</b> after AF is completed.</p>
<b>AGEING</b>	<p>Once AF and MLF completed: rack off gross lees after fermentation. Use inert gas during transfer.</p> <p><i>Optional: KillBrett at 4 g/hL</i> to prevent any microbial development and protect wine from spoilage.</p> <p><b>Aroma Protect at 15 g/hL</b> to reduce redox potential and increase natural wine resistance to oxidation.</p> <p><b>Tan&amp;Sense Volume at 1 g/hL</b> every racking to protect from oxidation and scavenge oxygen radicals.</p> <p>At this step, a first tannin trial can be done. Ask our tannin kit or send us a sample, we will run the trial for you.</p>