

# HYDR COR

*Because Water Matters*

## Effective Use of Our Product Line on Grapes

The use of HydrCor (OB50) for Cabernet Grapes in California has proven to be very beneficial to the operation. The vineyard has been a customer of ours for 3 years. This Wine Grape Trial using our protocol has produced some very interesting results. The trial project succeeded in establishing a unique 12,320-vine vineyard trial of a 25 year old Cabernet varietal in Mendocino Country (Mendocino Appellation), 12 miles South of Ukiah, located along the Russian River. 6,160 vines (11 acres) were used as the trial block and 6,160 vines were used as the control block.

The Cabernet root stock was planted in 1989 and vine performance has been slowly in decline for the past 3 years, largely due to established Phylloxera and Nematode parasite colonies. There were also instances of mites, leaf hoppers, Virginia leaf hoppers and blue green sharp shooters. In addition, the constant incursion of minerals and biological growth has caused adverse performance in the existing ½ GPH emitters (2 per vine). To combat these daunting challenges, the decision to introduce our product line through the drip irrigation system was made at 2 weeks post emergence during bloom with the implementation beginning on 05/05/14.

Despite these initial obstacles, the implementation was put in place in record-time (compared to similar evaluative implementation). During the next 2 months, fruit growth performance and vine health was noted to be more robust than expected and reflective of a marked difference between the control and trial blocks.

Overall, vines were in good condition through and up to post-emergence of the bloom. It was hoped that typical spring conditions would afford a fair comparison of spring acclimation and subsequent growth & survival performance into the 2014 growing season.

**Control Block 05/22/14**



**Trial Block 05/22/14**



In 2013, differences in crop load and quality were noted from previous years. These will serve as a basis of comparison in 2014 as the introduction of our product into the drip system is carried out on the mature vines.

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Each irrigation cycle is 1 gph / vine for 8 hours and re-occurs every 7 days. Foliar application was also used within specific protocols. At several points in the spring, bud break, cane growth, bloom, fruit set, canopy density, leaf turgidity and cluster growth were all monitored across the singular cultivar of Cabernet Grapes using the Eichorn-Lorenz Growth Stages format as guides. Vine mortality, and incidence of blank versus live buds was noted. These exercises provided an approximation of the relative differences between the control and trial blocks, which illustrated outcomes for the different vines. Cane pruning weights were also collected on two replications in connection with dormant pruning. This effort suggested their more desirable characteristics as a result from the application of our protocol versus the prior season's vigor and growth, as reflected by 2013 wood production.

Measurements were taken of the berries using calipers and counted on 10 bunches in the each of the control and trial blocks. The average dimension was used for comparison of berry circumference and length of bunches in each block.

**Control Block 06/16/14**



**Trial Block 06/16/14**



**Results:** The 2014 growing season to date has disclosed interesting comparative differences between the control and trial blocks ...

- Robust canopy appearance resulting from enhanced leaf turgidity
- Fruit set differential (Control Block = 70% < 5mm in dia., Trial block = 70% 7-10mm in dia. @ 6 weeks from budbreak)
- Fruit Set – bunches were noted to be approximate 1.5” longer in the trial block. Tendrils at the cane extremities were noted to be 3” – 5” long in the trial block as compared to 1” – 2” in the control block.

**Additional results:**

- Reduction in counts of Nematodes and Phylloxera
- Continued unmitigated functioning of the emitters and drip irrigation system
- Lack of powdery mildew and no noticeable leaf hoppers mites or sharp shooters.

The information presented herein is regarded as preliminary because final crop load management has not engaged in 2014, as full cropping and relative harvest timing are still being worked out for the site. Both aspects are expected to impact final results overall when applied in 2014. However, final grape quality, value for wine, and demand, will also play a final assessment role, particularly as more selective crop load management and maturity evaluation mediate results.

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**Control Block 05/22/14**



**Trial Block 05/22/14**



**Conclusions/Outcomes/Impacts:** Though cumulative analysis has provided desired results much better than hoped, we are filling in much of the information void that existed previously about the effective use of our protocol on grapes in this region. With this controlled study, we are moving from anecdotal lore too much more credible information as it is based upon side-by-side comparisons of the two adjacent blocks, grown at a single site right here in this region.

Serendipitously, in 2014, we seem to have hit upon a novel way for dramatically increasing vine health through the introduction of our products to the root system. This appeared to be more acceptable & effective than conventional nematode /phylloxera control measures in aging vineyards. Regular on the spot visual inspections by participants of this application, confirmed the simple evidence of the demonstrated results, and generated more interest in the potential of our product. In addition, with the active ingredient in our product, there is no accumulation nor residual continued effect, due to its efficient breakdown, after application, either via irrigation or foliar application.

By using our application formula after each cutting, you will see results of improvement. However, results based on detailed observations are based on their own unique results and experiences. All water is different; every environment is different; every operator is different; and of course, every soil and seed is different. We cannot guarantee you will see any specific result listed above. But what we can guarantee is that you will immediately have clean, clear, nutritional water, as a good start. Your plants and soil will have healthy, nutritional water and as a result you will see benefits from that alone. Then raising the oxygen levels will further contribute to your overall production success. Application rates vary; for application rates contact the Distributor in your area. If there is no Distributor please contact us directly. Note: This is not a “magic bullet” solution. *Our customized formulation, procedures, and protocol depend on many factors, and are available exclusively to our customers.*

*If this makes sense to you, please give us a call; we would love to have you as a customer.*

**CLEAN ~ CLEAR ~ NUTRITIONAL WATER IS OUR PASSION!**

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*Caution: do not add fertilizers in the water at the same time as you add HydroCor (OB50), without doing a Jar Test. Some fertilizers might plug emitters when mixed with oxygen. Always consult either your local Distributor or us prior to application to make sure it is done right.*



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## Effective Germination with HydroCor (OB50)

The use of HydrCor (OB50) for Germination of Seeds is an important “tool” to reduce the potential of bacterial contamination. The use of a custom-formulated HydrCor (OB50) solution in the germination process has proven to accelerate the process and to be very effective in controlling bacterial concerns. This process was also used successfully in fodder applications of all kinds. The comparison of seeds used with HydrCor (OB50) and seeds that were not treated was very evident. The HydrCor (OB50) process significantly enhanced the process by more than 15%. Water actually plays a vital role in many parts of your operation. Without water, no production involved on any type of farm would be possible. If water is that important, it is equally as important to note that the **quality** of that water is equally critical to your operation.

Disinfecting seeds is imperative, as all seeds carry food-borne pathogens. Bacteria build-up (foodborne pathogens) such as E.coli, salmonella, listeria and staphylococcus aureus is a consistent issue. Thorough cleaning & adapted disinfection routine decrease the pathogen level which in turn prevents or breaks the cycle of disease. Water is a natural cleanser, and can make managing these issues much easier and cost-effective.



HydrCor (OB50) is a unique water treatment & purification system that has been around for years. Our “Premium Quality” Product is not only stabilized to give it better efficacy, it also has a proprietary formulation and is custom-made to fit your water needs. Our product helps disinfect and keep your plumbing clean and unplugged. With the addition of our stabilizer you will see long-lasting efficacy, and protection for your pipes against corrosion. It also helps bind and tie up contaminants, while softening your water up to 25%.

***Seed germination is the most pivotal phase of the plant life cycle, affecting plant growth and productivity.***

Healthy seeds are critical to your success. We can help you accomplish a safe environment and process with our processes and line of products. However, the observations listed above are from specific situations, based on their own unique results and experiences. All water is different; every environment is different; every operator is different; and of course, every soil and seed is different. We cannot guarantee you will see any specific result listed above. But what we can guarantee is that you will immediately have **clean, clear, nutritional water**, and in a very short time, better results than without our applications. When your plant and soil have healthy, nutritional water it's a good start. Raising the oxygen levels will further contribute to your overall production success. Application rates vary from operation to operation. For well-designed application rates, contact the Distributor in your area. If there is no Distributor, please contact us directly.



Note: This is not a “magic bullet” solution. Our customized formulation, procedures, and protocol depend on many factors, and available exclusively to our customers.

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*Caution: Bacteria and contaminants are everywhere. Your seeds need to be disinfected, however we do not suggest over soaking your seeds for long periods of time.*