

AquaMate® Improves Soil Biology by 80% - 150% Over Control



.....This demonstration has shown that AquaMate® offers growers many benefits over just cleaning irrigation systems.....

CASE STUDY

Grower	University of California, Davis
Agronomist	
Location	USA
Crop	Grapes

Demonstration Purpose

A one-year study at the University of California, Davis was completed during the 2020 growing season to examine whether **AquaMate®**, added at 20ppm into the irrigation water during the first year of berry production, could help increase vine health by increasing the amount of AMF (Arbuscular Mycorrhizal Fungi) in the soil.

Demonstration Set Up

During the first year of berry production, because the berry harvest is not yet economically meaningful, the farmer's goal is to maximize the growth and health of the vines.

The vines were deliberately stressed. One group of vines received normal irrigation and one group received half this amount, thus creating water stress, while both the third and fourth groups had normal irrigation and half irrigation respectively but no AquaMate® was applied to these plots. Additionally, the 2020 growing season was the hottest and driest in 20 years.

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Application Stage	Product Applied	Application Rate
Each Irrigation	AquaMate® in Each Irrigation	20ppm

Demonstration Result

- At full irrigation, AquaMate® increased mycorrhizal colonization by 80% over the untreated.
- At half irrigation (more stress), AquaMate® increased mycorrhizal colonization by 150% over the untreated.
- At half irrigation, the vines showed increased trunk size and leaf cover.
- AquaMate® increased photosynthetic activity.
- AquaMate® improved carbon assimilation and water use efficiency.

The Financial Return

During the first year of berry production, because the berry harvest is not yet economically meaningful, the farmer's goal is to maximize the growth and health of the vines. Next season will offer an economic analysis.

Conclusion

This demonstration has shown that AquaMate® offers several benefits over just cleaning irrigation systems.

The mode of action of AquaMate® increasing the dissolved oxygen of water through its microbubble technology resulting in greater aeration of soils, creates a favourable environment for increased microbial activity. This in addition to increased photosynthetic activity, improved carbon assimilation and water use efficiency is offering growers of all irrigated crops significant benefits for their farming systems.

About Advanced Nutrients

Advanced Nutrients is a leader in the development of innovative, environmentally benign fertilisers which cost less and deliver more. For the last 22 years, smart agricultural, horticultural and livestock producers throughout Australia, Africa, Asia and the Middle East have been using our products to cut input costs, boost returns and reduce farming costs.

