



Rethinking Vineyard Trellis Posts: Sustainable Alternatives to CCA-Treated Wood Posts

| ABSTRACT

This white paper explores the potential drawbacks and concerns associated with using Chromated Copper Arsenate (CCA) treated wood for vineyard trellis posts. While CCA-treated wood has been a popular choice for outdoor applications due to its durability and resistance to decay, it poses specific risks and challenges when used in vineyard settings. This paper outlines these negatives and suggests alternative materials and treatments that may be more suitable for sustainable and environmentally friendly vineyard management.



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01. INTRODUCTION

Vineyard trellis systems are essential components of grape cultivation, providing support for vines while facilitating optimal growth and fruit production. Traditionally, treated wood, including CCA-treated wood, has been a common choice for trellis posts due to its affordability and durability. However, the use of CCA-treated wood in vineyard settings has raised concerns regarding potential negative impacts on vineyard ecosystems, worker safety, and long-term sustainability.

02. NEGATIVES OF CCA-TREATED WOOD

a. Environmental Impact:

- **Arsenic Contamination:** CCA-treated wood contains arsenic, which can leach into the surrounding soil over time. Arsenic is a known carcinogen and poses risks to both the environment and human health. It can contaminate groundwater and harm nearby ecosystems.
- **Copper and Chromium Release:** CCA-treated wood also contains copper and chromium, which can leach into the soil and water, negatively affecting aquatic life and vegetation.

b. Worker Safety:

- **Handling Hazards:** Workers involved in the installation and maintenance of CCA-treated wood trellis posts may be exposed to hazardous chemicals. Proper safety measures, such as personal protective equipment, are required to minimize risks.
- **Respiratory Risks:** Cutting or sanding CCA-treated wood generates dust and fumes that can be inhaled, potentially causing respiratory problems.

c. Long-Term Sustainability:

- **Lifespan Limitations:** While CCA-treated wood is known for its durability, it eventually deteriorates and requires replacement. The disposal of old CCA-treated wood can be problematic due to its toxicity.

03. ALTERNATIVES TO CCA-TREATED WOOD

a. Concrete Posts:

- Concrete trellis posts offer excellent durability and resistance to decay. They are a viable alternative, particularly in areas with high humidity or frequent contact with moisture. Concrete posts are also inert and do not pose environmental risks associated with chemical leaching.

b. Metal Posts:

- Metal posts can provide long-lasting support for vineyard trellis systems compared to wood, but it's important to consider their drawbacks. They are prone to rust, which can leach into the soil, harming vine health and the ecosystem while also affecting the vineyard's appearance. Ongoing maintenance, limited material variety, and environmental impact are also a factor.

c. Untreated Wood:

- Selecting naturally decay-resistant wood species, such as cedar or redwood, can provide a sustainable option for trellis posts. However, these materials may be more expensive upfront.

d. Alternative Treatments:

- Copper-based treatments, such as copper naphthenate or copper azole, can provide protection against decay without the use of arsenic or chromium.

By considering these alternative materials, vineyards can make informed choices that align with sustainable and environmentally responsible practices while ensuring the longevity and effectiveness of their trellis systems.

04. COMPLIANCE WITH ORGANIC FARMING STANDARDS

The US National Organic Program (NOP) standards are stringent in their guidelines for vineyard trellis materials. They explicitly prohibit the use of wood treated with arsenate or other prohibited substances, such as creosote, for new installations or replacements. Section §205.206(f) of the National Organic Program Regulations declares that “a producer must not use lumber treated with arsenate or other prohibited materials for new installations or replacement purposes in contact with soil or livestock.”

It's important to note that while treated wood in existing trellis systems that are certified to National Organic Standards (N.O.S) is allowed, any replacement wood used in these systems must not be treated. This underscores the importance of making informed choices in vineyard trellis construction, ensuring alignment with organic farming standards and principles of sustainability.

Source:

<https://www.ams.usda.gov/sites/default/files/media/NOP%205036%20Treated%20Lumber%20Draft%20Guidance.pdf>

<https://attra.ncat.org/publication/pressure-treated-wood-organic-and-natural-alternatives/>

05. PROHIBITION OF ARSENATE-TREATED LUMBER

In accordance with the guidelines set forth by the Organic Materials Review Institute (OMRI), it is important to note that arsenate-treated lumber is prohibited in organic farming and vineyard practices. OMRI is a reputable organization that evaluates and verifies the suitability of materials for organic production. Arsenate-treated lumber does not meet the criteria for organic farming due to its arsenic content and potential harm to the environment and human health.

Source:

https://www.omri.org/sites/default/files/app_materials/22StanMan-amended-June-2023.pdf

06. CONCLUSION

While CCA-treated wood has been widely used for vineyard trellis posts in the past, it carries significant environmental and safety concerns. Additionally, it is important to emphasize that arsenate-treated lumber is prohibited in organic farming, aligning with the principles of sustainability and environmental responsibility. By opting for alternative materials and treatments, vineyards can make more informed and responsible choices, contributing to the preservation of ecosystems and long-term sustainability in grape cultivation.