

# Utilizing Bright Sand Aqueous Solution for Canker Sore Treatment in Trees



Canker Recovery: Dr Judi Krzyzanowski

## Introduction

Bright Sand Canada has developed a proprietary aqueous solution, patent pending in the USA and Canada, containing wood vinegar. This innovative solution has shown significant promise in treating canker sores on butternut trees. Testing conducted by Dr. Judi Krzyzanowski from Krzyzanowski Consulting confirmed the efficacy of this solution at various concentrations. This white paper explores the formulation, testing results, and potential applications of the Bright Sand aqueous solution in the treatment of canker sores on butternut trees.

## Background

Canker sores on trees, caused by fungal pathogens, pose a significant threat to tree health and can lead to tree decline and death if left untreated. Traditional methods of managing canker sores often involve chemical treatments that can be harmful to the environment. The Bright Sand aqueous solution offers a more sustainable and effective alternative for treating canker sores.

## Composition of Bright Sand Aqueous Solution

The Bright Sand aqueous solution is a blend of water and wood vinegar, a natural byproduct of wood pyrolysis. Wood vinegar contains a mixture of organic compounds, including acetic acid, methanol, and various phenolic compounds, which contribute to its effectiveness in inhibiting fungal growth.

### **Mechanism of Action**

The solution works by directly interacting with the fungal pathogens within the canker, inhibiting their growth and preventing further damage to the tree. The organic compounds in wood vinegar are believed to alter the cell wall structure of the fungi, disrupting their ability to thrive and spread.

### **Testing and Results**

#### **Methodology**

- Sample Preparation: Butternut trees with active canker sores were selected for treatment. The cankers were documented and measured to establish a baseline.
- Additive Application: The Bright Sand aqueous solution was prepared at concentrations of 3% and 5% and injected directly into the cankers.
- Monitoring Process: The treated trees were monitored over several weeks to assess changes in canker size and tree health.
- Analysis: The effectiveness of the solution in stopping canker growth was evaluated using standard arboricultural techniques, including visual inspection and measurement of canker progression.

#### **Findings**

The testing conducted by Dr. Judi Krzyzanowski yielded the following results:

- Canker Growth Inhibition: The application of the Bright Sand aqueous solution effectively stopped the growth of cankers on the treated butternut trees.
- Optimal Concentration: All tested concentrations (1%, 3%, and 5%) were effective, with higher concentrations providing more rapid results.
- Tree Health: Treated trees showed signs of recovery and improved overall health, indicating the solution's potential for not only halting canker growth but also promoting tree vitality.

## **Potential Applications**

### **Forestry and Arboriculture**

- Tree Health Management: The aqueous solution can be used by forestry professionals and arborists to manage canker sores in butternut trees and potentially other tree species.
- Sustainable Treatment: Its use aligns with sustainable forestry practices, reducing the reliance on harmful chemical treatments.

### **Agriculture**

- Orchard Management: The solution can be employed in orchards to treat fungal infections in fruit and nut trees, helping to maintain tree health and productivity.

### **Conclusion**

The Bright Sand aqueous solution, with its innovative formulation and demonstrated effectiveness in treating canker sores on butternut trees, presents a practical and environmentally friendly alternative to traditional chemical treatments. Its low concentration requirements, ease of application, and significant impact on fungal growth inhibition make it a valuable tool for forestry, arboriculture, and agriculture. Further research and field trials will help in optimizing this technology for broader adoption.

### **References**

- Krzyzanowski, J. (Year). "Testing of Bright Sand Aqueous Solution for Canker Sore Treatment in Butternut Trees." Krzyzanowski Consulting.