Terpene Impact Study and Biomass Improvement VocaGro™

Improvement of Bio-Alchemical Plants Through Natural VOC Signaling

Internal Research Edition — Prepared by Dr. Robert Faust

This internal research report documents the improvements observed in terpene complexity, biomass yield, and the vitality of plants resulting from bioactive signaling of fungal VOC from VocaGro™. Trials conducted by Dr. Robert Faust at Mana Life Lab demonstrated that the natural volatile compounds emitted by VocaGro™ fungal culture activate the plants' metabolic pathways, producing measurable increases in aromatic diversity, floral density, and overall crop quality.

BIO-AG
CORPERATION

Impact study of terpenes and biomass improvement VocaGro™

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Greenhouse comparison — VocaGro™ treated vs control

Yield increase: +40% biomass yield, +4% moisture retention (treated vs control)

Greenhouse trial — Mana Life Lab | PREE Verified Laboratories

Comparison of greenhouses — VocaGro™ Treated vs Control

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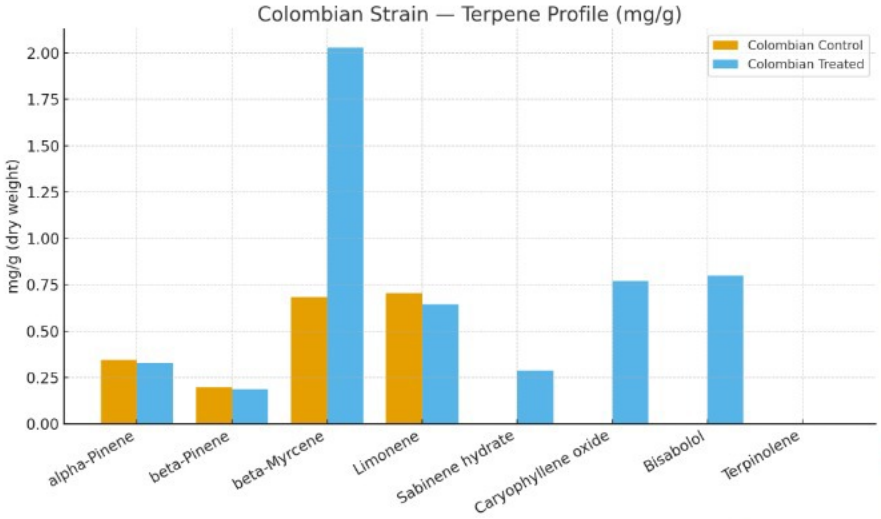
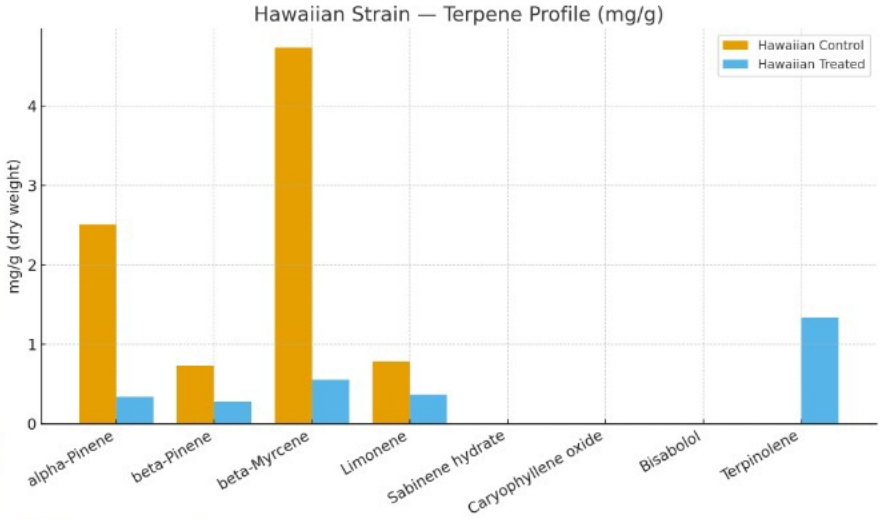
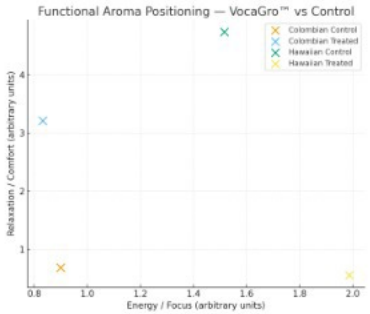
Greenhouse trial — Mana Life Lab | PREE Verified Laboratories

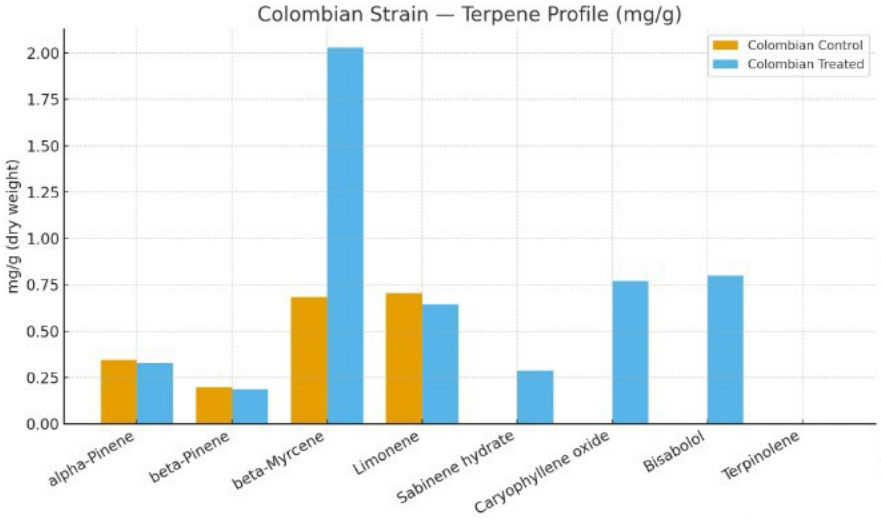
Analytical results — Terpene profiles and functional positioning

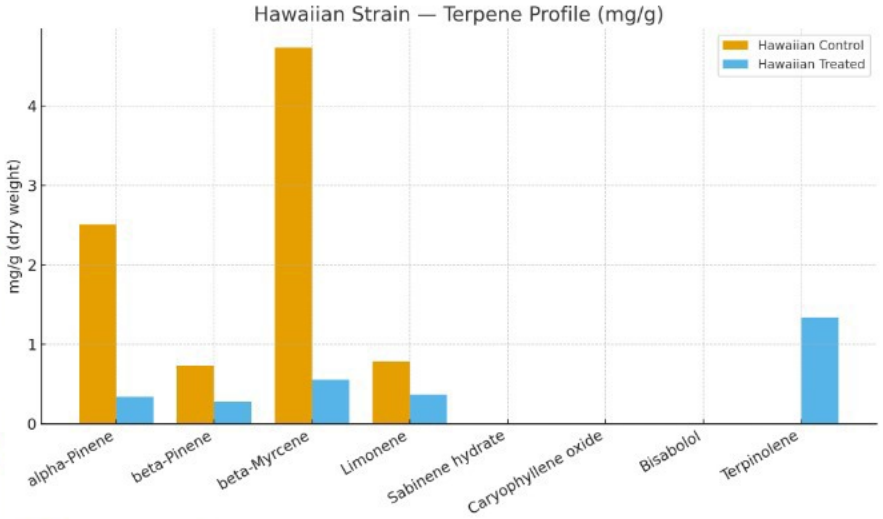


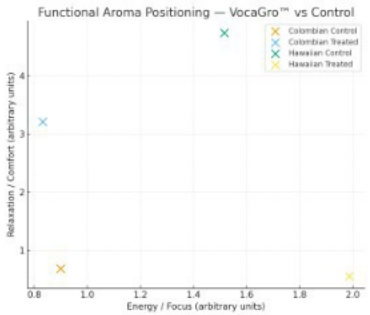




Analytical results — Profiles of terpenes and functional positioning







Biomass Demonstration — Treaty vs Control

Demonstration of biomass — Treatment vs Control

Cross-validation of crops — Tomato seedlings (BioAg VOC vs Control)

Crop validation—Tomato seedlings (BioAg VOC vs Control)

Agronomic and Market Implications

- The high complexity of terpenes and the total concentration improve sensory quality and perceived potency.
- Bio-volatile stimulation is passive and scalable: no foliar or root application is required.
- A cleaner citrus-floral-herbal spectrum replaces sharp pine notes for greater consumer appeal.
- Compatible with organic and regenerative cultivation frameworks.
- Demonstrated consistency in two cultivars (Colombian, Hawaiian) with different chemotypes.
- Supports premium positioning for medical and connoisseur markets.

Agro-economic and market implications

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