Who We Are

- Parent company is John I Haas, Inc. Part of the Barth-Haas Group. The Barth-Haas Group is currently managed by the 7th and 8th generation of the Barth family. Founded in 1794.

- Privately owned, vertically integrated, multinational company that grows, processes and trades hops and hop products worldwide.

- Caters mainly to the needs of the world-wide brewing industry and also to industries beyond.

- The Barth-Haas Group consists of a diverse range of small to mid-sized companies engaged in a broad spectrum of hop activities.
Our Global Footprint
From the Fields in the US, Australia and Germany...
... to the glass in our Innovations Breweries

Bavaria, Germany

Yakima, WA
Processing Plants

Germany

USA
Working wonders with hops.
What do you associate Hops with?
Well there is more.......
Markets

- Antimicrobial processing aids:
  - Sugar, Spirits, Ethanol & Yeast

- Functional ingredients:
  - Nutraceuticals & Supplemental

- Bee Health
  - Varroa Mite Control

- Food flavorings
The most troublesome bacteria in the Ethanol Industry are the Gram-positive Lactic Acid Bacteria (LAB). This is due to the following:

- Optimal growth conditions for LAB in fermenters (high sugar & low oxygen).
- Diversion of sugar away from ethanol production.
- Competition for trace elements with yeast.
- Production of compounds (lactic & acetic acid) detrimental to yeast growth and will lead to loss in alcohol production.
Antimicrobial Technologies

- **Antibiotics**
  - Effective for bacteria control
  - Concern that overuse of antibiotics may contribute to emergence of resistant pathogenic bacterial strains harmful to animals and humans
  - Presence of antibiotic residues in co-products (DDGS) can negatively impact their marketability

- **Chemicals**
  - Effective for bacteria control
  - Potentially Hazardous and toxic
  - Non-selective, attacks all organisms including yeast

- **Hop Acid Extract**
  - Effective for bacteria control
  - Naturally derived, food grade product, long history of safe use
  - No effect on yeast activity or vitality
Hop Acid Extract Technology

- Hops have been used for centuries to control gram-positive bacteria (LAB) in beer and impart desirable flavor and aroma.
- Antimicrobial properties of hops are due to alpha and beta acids contained in the lupulin glands of the female hop cone.
Mode of Action

★ Hop acid extract lowers the intracellular pH and disrupts the glucose uptake.
Advantage of Hops

- Industry proven as bacteria stasis, not biocide, so completely transparent to yeast.

- Move to Green, all natural product, GRAS, no safety issues.

- No need to worry about antibiotic resistance.

- Eliminate all possibilities of antibiotic residues in co-products before & after distillation.
Thank You!