

Fractionation; An Owner's View

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FEW Workshop
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Since 1980 - Technology Leaps

- ❑ Molecular sieve
- ❑ 150,000 BTU to 30,000 BTU
- ❑ 6+ gallons water to <4 gallons
 - ❑ Since 1995, minor breakthroughs
 - ❑ Before cellulose, we need improvements

Why are we doing it?

- ❑ 10,000 BTU/gal = \$7,500,000 a year
- ❑ ½ gallon per gallon = 50,000,000 gal
- ❑ Up to 30% more capacity
- ❑ DDGS market risk
- ❑ Natural Gas cost risk

Technical Questions

- Foaming Fermenters?
- Centrifuges: Will they work?
- Beer Column: will it foul and plug?
- Cook viscosity: Too Thick?
- Syrup Solids: How high or how low?
- Beer proof: How high?
- Wet cake: Will it convey? Will it dry?

Pilot Plant Results

- No foaming fermenters
- Centrifuges run as well or better
- Beer columns stayed clean
- Starch viscosity higher but still pumps
- Less syrup at lower viscosity
- Over 16% v/v beer, high yield
- Wet cake conveys, DDG flows
- DDG protein 45 to 50% protein

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