Opportunities and Management of Sorghum as a Bioenergy Crop

www.nexsteppe.com
NexSteppe - Seed Company

Be a leading provider of scalable, reliable and sustainable feedstock solutions for the biofuels, biopower and bioproduct industries.
Brent Bean
Director of Agronomy

• Former Professor and Extension Agronomist with Texas A&M University
  – Sorghum, corn and wheat specialist
  – Lots of field studies with energy sorghum and forage sorghum resulting in several published papers along with national and international presentations
Biofuels
Conversion of sugars and biomass into liquid transportation fuels
Including ethanol, biodiesel and advanced fuel molecules.
Biopower
Sorghum can be a substitute for coal
Biobased Products

Conversion of sugars or biomass to substitute for oil to make products such as plastics, vinyl, and chemicals.
Sweet Sorghum Brand

- **Malibu** Sweet Sorghum
  - Currently have 7 commercial hybrids
Sugarcane Mill
Sweet Sorghum
Where?

- California Ethanol & Power
  - Imperial Valley
  - Begin building 1\textsuperscript{st} Q of 2014
  - 66 million gallon ethanol facility
  - 40,000 acres of sugarcane
  - 30,000 acres of sweet sorghum
High Biomass sorghum Brand

• **Palo Alto** High Biomass Sorghum
  
  – One commercial hybrid with others to be released in 2014
High Biomass Sorghum
2013 Trials in Oregon

- **N-52K1009**
  - 10 Dry ton/acre at Hermiston, OR Trial in 2013

- **Yield range**
  - 6.0 to 12.8 tons

- **Ratoon Yield**
  - **N-52K1009**
    - 6 ton/Acre
Arundo

Miscanthus

Switchgrass
Advantages of Sorghum

• Easier for a farmer to commit to growing an annual crop than a perennial
• Crop made in 120 – 140 days
• Sorghum is known for its drought tolerance
• Establishment cost are low
• Known agronomy practices for sorghum
## Sorghum Inputs

<table>
<thead>
<tr>
<th>Input</th>
<th>Amount</th>
<th>Cost/Acre</th>
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<tbody>
<tr>
<td>Seed</td>
<td>90,000 sd/Ac</td>
<td>$55.00</td>
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<tr>
<td>Fertilizer (N-P-K)</td>
<td>140/60/140</td>
<td>$180</td>
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<tr>
<td>Herbicide</td>
<td>Bicep 1X rate</td>
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<tr>
<td>Insecticide</td>
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<tr>
<td>Irrigation</td>
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<td>$80</td>
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<tr>
<td>Harvest Cost</td>
<td>Hay/Silage/Chop</td>
<td></td>
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</tbody>
</table>
THANK YOU!