



Opportunities for Partnerships

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Little Sioux Corn Processors



Little Sioux Corn Processors originally organized as Limited Liability Company (LLC)

- Allows small business men and women and retired farmers to invest
- Allows farmers who do not live within delivery distance to invest without a delivery obligation
- Little Sioux was first ethanol plant to register with the Iowa Securities Commission (ISC)
 - Had to educate ISC, and our attorneys
 - Learned that it is good to be on the leading edge of an industry or technology; but expensive to be on the bleeding edge



Little Sioux Corn Processors experience

- State registration rather than federal (cost)
- More difficult and restrictive to sell shares in an LLC versus a Cooperative
- If more than 500 investors, same filing requirements with Federal Securities Exchange Commission as large companies like General Motors



Fund raising challenges-Little Sioux

- Worked equity drive for 10 months but only raised 60% of needed equity
- Decided to establish Limited Liability Partnership (LLP) and sell shares to 4 partners, including ADM (largest ethanol marketer in the nation)
- This decision created lots of discussion around the board table
- Our “partners” have been good deal-marketed our ethanol near top of market



Limited Liability Partnership (cont.)

- Each of the limited partners has 1 seat on the board
- LLC has 9 seats on the board
- Limited partners bring valuable insights to the board table - look at decisions from a business point of view



My advice, based on this experience

- Do not be afraid to partner with large corporations
- Select partners who are leaders in the industry if you are producing a commodity or consumer product
- Personally, I would NOT insist that small investors maintain control
- Profits from these types of enterprises can help supply \$\$\$ to family farms



New technologies for dry mill ethanol industry

- Oil extraction from the syrup produced as a byproduct in dry grind plant
 - Projected cost = \$1M
 - Extract about $\frac{3}{4}$ pound oil from each bushel of corn processed
- Oil sold to livestock feed market @ \$.15 - \$.18/pound versus \$.04/lb for DDGS
- In future, oil should be in demand for biodiesel production or human food market



Another new technology

- Fractionization of corn kernel at beginning of the dry grind process
- If successful, will be possible to remove the germ and the pericarp before cooking and fermentation
- Allows more starch to be loaded in each fermentation tank, and more ethanol produced in each batch
- Oil from germ can be separated at the beginning of the process = more oil to sell



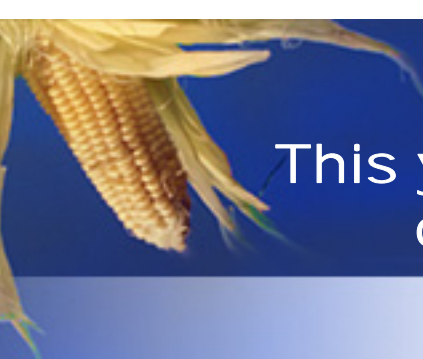
Forecast for future...

- Iowa Corn Promotion Board and National Corn Growers Association are researching ways to make more valuable chemicals from parts of the corn kernel
- These groups will try to make any businesses which are developed from these processes available to farmers for investment



Forecast for future (cont)...

- Recent study by NREL assessed strategies for deploying lignocellulosic ethanol technology
- Study showed that among the range of options for accelerating the deployment of the industry, ***one of the most effective strategies involves taking advantage of the existing ethanol industry as a way to reduce capital and risk for testing new technology components***
- This approach more effective than offering or extending subsidies for fuels or carbon credits



This year, NREL will do more detailed modeling assessing opportunities for deployment in ethanol industry

- Use of pretreatment technologies for recovering sugars from corn fiber in DDGs
- Use of new fermentation organisms for increasing ethanol yields from corn grain
- Introduction of new products from corn grain sugars
- Introduction of corn stover as an additional feed to an existing corn ethanol facility, as a source of both sugars and heat and power



Deploying any of these options.....

May provide unique opportunities for existing corn ethanol producers to grow into fully integrated biorefineries....

....and opportunities to “partner” with other businesses (large and small)