

## Kernel Fiber Technology KFT™

"A Proven & Diverse Value Proposition"

Leveraging Gen 1 Bioethanol facilities September 25, 2019









## **Quad County Corn Processors Mission**



"Quad County Corn Processors Cooperative adds value to corn through innovation,

which creates shareholder value."







## KFT's proven & diverse value proposition

- Increased distiller's corn oil yield
- Premium for concentrated protein & improved digestibility
- Increased ethanol yield
- Cellulosic D3 RIN value
- Low carbon intensity premiums in carbon markets
- Potential federal cellulosic ethanol tax credit





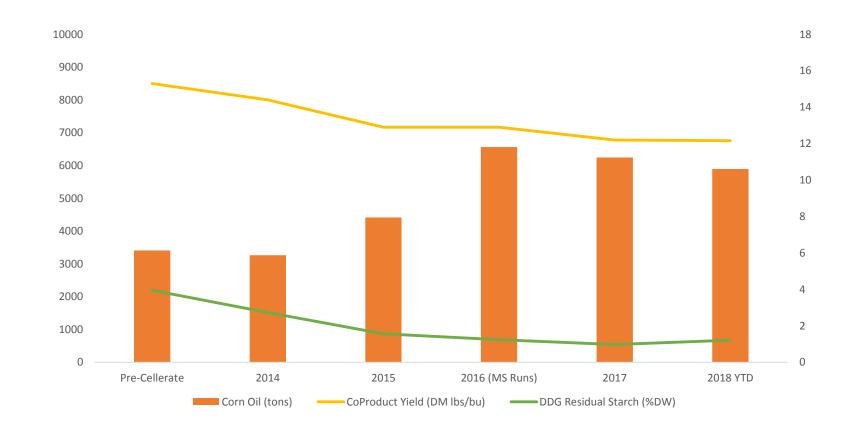
## Distiller's Corn Oil







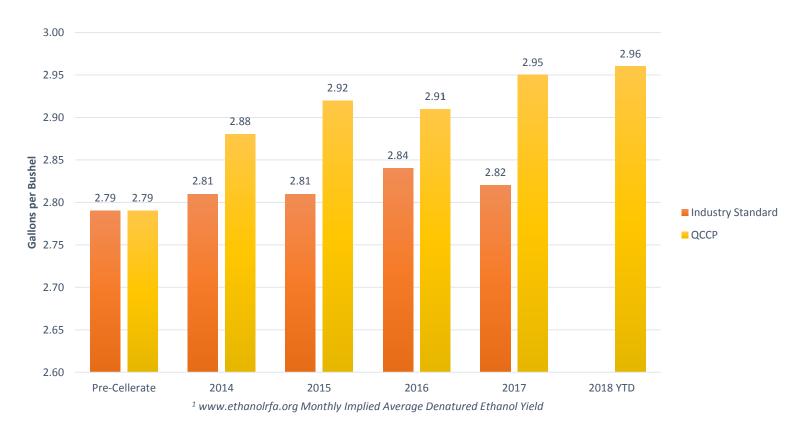
## Corn Oil vs. Co-Product Yield/Residual Starch







### **Ethanol Yield**





# Kernel Fiber Technology KFT™ "Certainty"

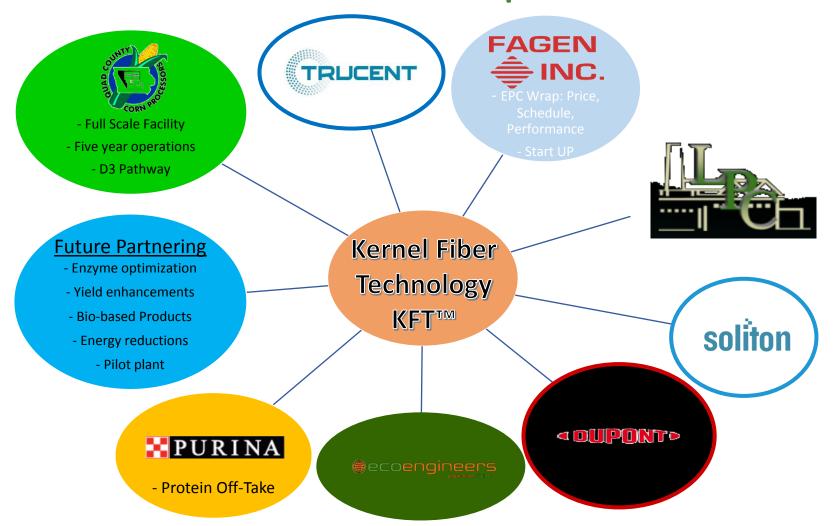


- <u>Fagen Inc.</u> provides Engineering, Procurement and Construction wrap (EPC) & Process guarantees
- Purina can provide High Protein Feed off-take contracts with premium
- Comprehensive financial Value Model tested by <u>CFO Systems</u> provided as initial feasibility to evaluate customer specific business conditions and ROI
- Tailored Mass and Energy Balance with Aspen Modeling specific to each customer provided by <u>Litzen Process Consulting</u> as part of the feasibility evaluation
- Low CI product providing entry into CA markets
- Kernel Fiber Technology KFT™ utilizes traditional ethanol plant equipment



## Partnerships



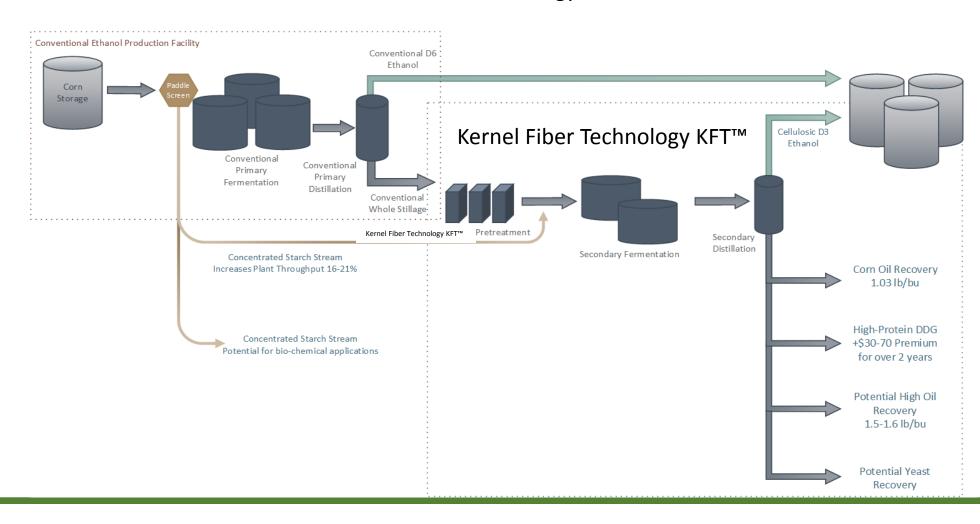


Multiple
opportunities
for future
downstream
high-value
products that
create
additional
value

## Kernel Fiber Technology KFT<sup>TM</sup> Process Flow



Kernel Fiber Technology KFT™





#### Technologies following Kernel Fiber Technology KFT™



- Starch Rich Stream Patent applied for July 2017
  - Bio-Chemicals
  - Feedstock for non-fuel industrial products
- Distiller's corn oil yield improvement up to 1.6 lbs. / bushel of corn
  - QCCP piloted for 2 weeks on 10% of our production
  - Scaling to 100% of production in progress
- Additional protein value increase using an add-on technology
  - Reviewing and validating the hypothesis
  - Next stage small scale production and feeding trials





## Kernel Fiber Technology KFT™

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