

# Scaling Up Biotechnology

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# SEE THE WORLD DIFFERENTLY

+

**28**  
PLANTS

**1,900** TEAM  
MEMBERS

**\$200**  
MILLION

(average) contribution  
to each plant's  
local economy

**10** BILLION  
POUNDS

of distillers dried grains  
produced annually

**\$6 BILLION**  
IN ANNUAL REVENUE

**800%**  
GROWTH  
since 2000.

**500** MILLION  
POUNDS  
of corn oil per year.

**1.8**  
BILLION  
gallon production  
capacity.

and distributed  
to countries  
throughout  
the world.



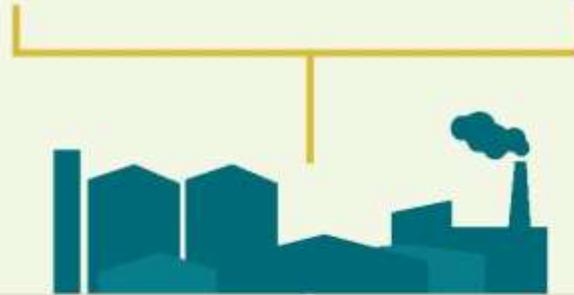
# THE ART OF POET BIOREFINING



CORN



AGRICULTURAL  
RESIDUE



ETHANOL



DDGS



OILS



BIOGAS



BIO-BASED  
CHEMICALS

CO<sub>2</sub>



FIBER

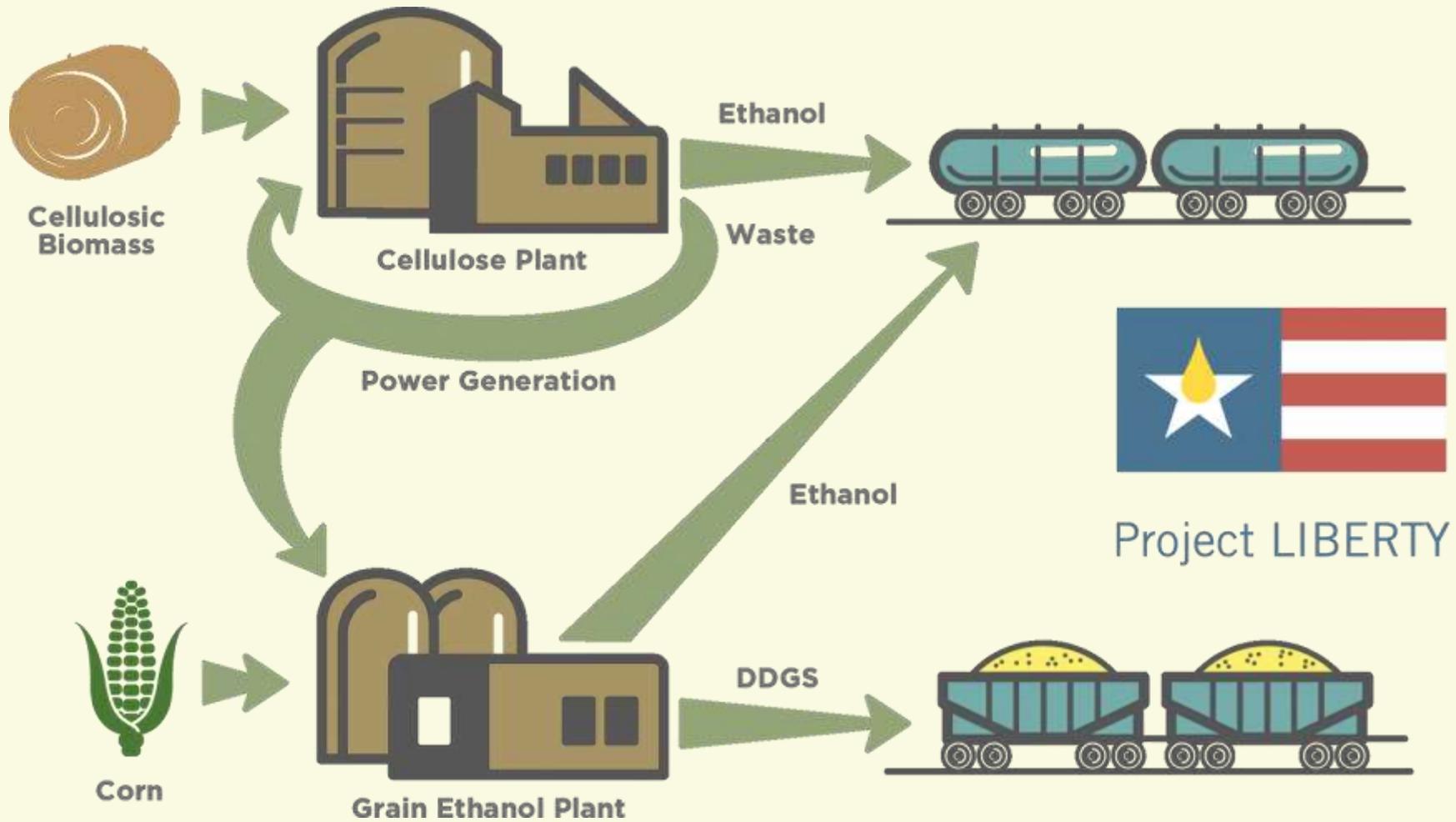


ZEIN



LIGNIN

# POET-DSM'S INTEGRATED MODEL





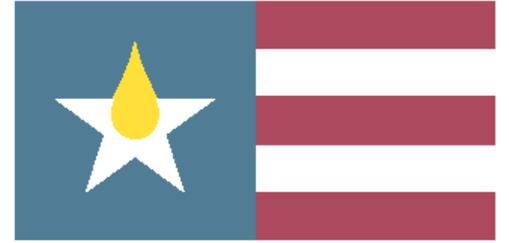
POET



POET

# Liberty Update

- Biomass collection increasing
  - 2017: 95,000 tons
  - 2018: 220,000 tons
  - Environmental Impact = 85% - 95% GHG reduction to 2005 gasoline baseline
- Pretreatment
  - 80% uptime in pretreatment
  - Success rate of 72 gallons per ton
  - Shipping biofuel regularly
  - Clear path to full production and licensing
- OSM - On-Site enzyme Manufacturing facility
  - Partners investing in DSM's OSM enzyme production
  - Target Completion = Q3 2018
  - Will employ 10 full time jobs



POET





**HIGHER  
BLENDS**



**OPTIMIZED  
ENGINES**



**SUSTAINABLE  
AGRICULTURE**

# **THE FUTURE OF ETHANOL**

**OFFERS A BETTER SET OF FUTURE  
CIRCUMSTANCES**



**BETTER  
ECONOMY**



**CLEANER  
AIR**



**LESS  
FOREIGN  
OIL**



**THANK  
YOU**

