DEMONSTRATING LEADERSHIP IN BIOFUELS

Advocating for farmers

Nate Green
Director, Biofuels

Objective: Support renewable fuels growth to enhance demand for crop-based feedstocks produced by farmers

Demonstrate Leadership

Show what's possible with biofuels through actions and words

Broaden the Coalition

Leverage Deere's unique influence to increase awareness and support

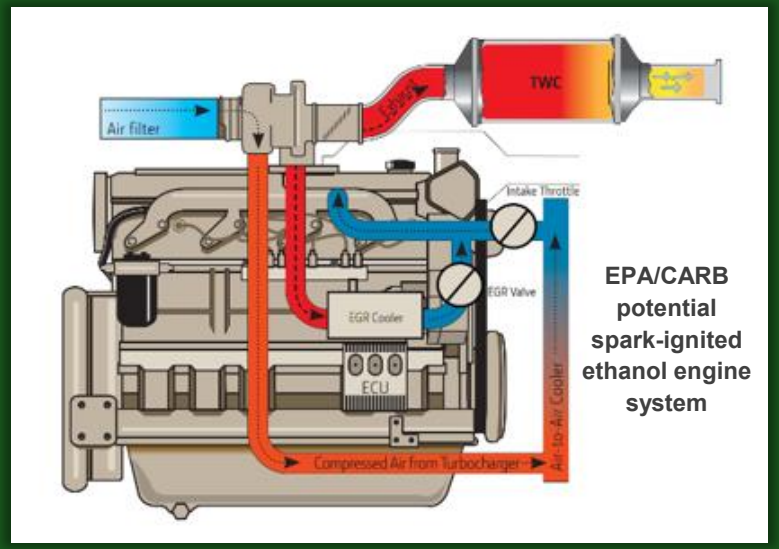
Affect Policy & Economics

Advocate for prioritized policy outcomes and invest to advance biofuel growth

Ethanol (e98) Tractor

- **Feb 2026:** Prototype unveiled at Commodity Classic
  - 8-series, with 9.0-liter engine
  - Similar power to diesel engine, lower emissions, no DEF
- **2026:** Deere testing prototype in real on-farm operations
- **Next:** Continue product, market, regulatory development

HOMEGROWN HORSEPOWER
POWERED BY E98 ETHANOL
PROTOTYPE

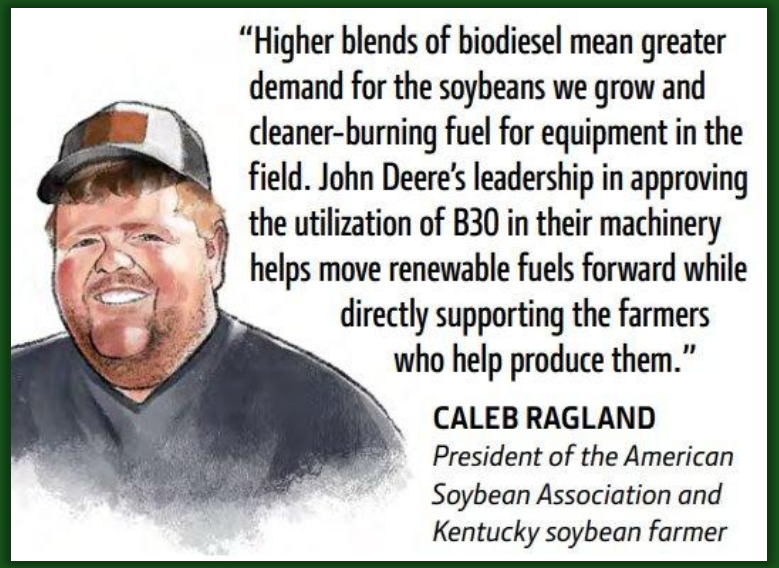


EPA/CARB potential spark-ignited ethanol engine system

Powered by B30: High Biodiesel Blend Demonstration

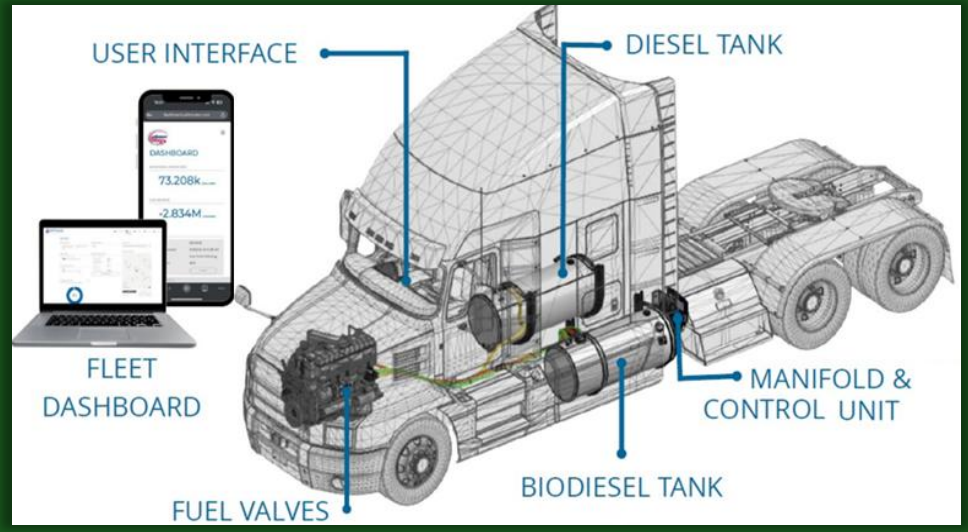
- **Aug 2025:** Deere approves B30 use in all Deere tier IV engines
- **Mar 2026:** Program launched to demonstrate effective use of B30 to power Deere equipment during Spring planting
- **Next:** Tell story of our farmer-customers' B30 experience
  On-farm Best Practices Guidelines published by CFAA

POWERED BY B30 BIODIESEL



Deere Fleet – B100 Biodiesel Demonstration

- **Mar 2026:** Project initiated to convert 5 fleet trucks to B100
- **Jul 2026:** Site prep at Deere Parts Distn. Center – Milan, IL
- **Aug 2026:** Trucks upgraded with B100 technology
- **Next:** 6-month demo of B100 trucks in Deere supply chain



Biofuel Cocktail: Flex Fuel Concept for Diesel Engines

- **2024-Present:** Purdue University R&D
  - Mixed diesel blends: ethanol, biodiesel, and renewable diesel
  - Engine testing of fuel blends and sensor development
- **Aug 2026:** Consortium announced – strategic & financial partners
- **Next:** Continued tech/blend development; supply & infrastructure

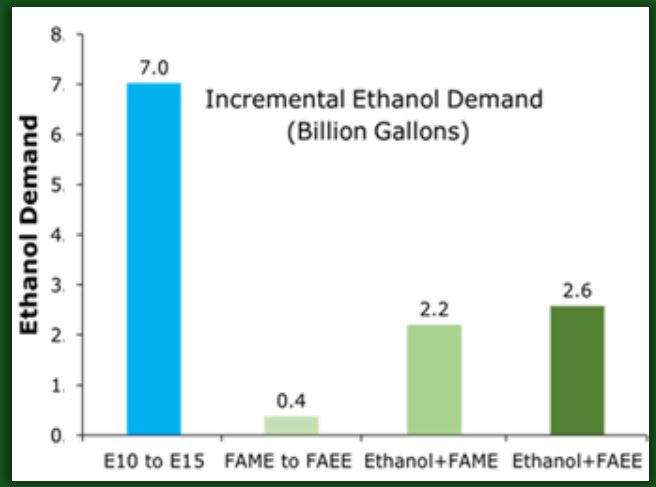
Consortium
Purdue Univ.
John Deere
Cummins
POET
Marquis Energy
Ag Processing Inc.
Growth Energy

Principal Scientist
Purdue Prof. Greg Shaver

E20 / B20 / D60
Dr. Junli Liu

Deere 13.6-L diesel engine
Prof. Eric Holloway

***U.S. BD prod. Capacity: 2.2B gal**
****Blend capability: 1 ETOH : 1 BD**



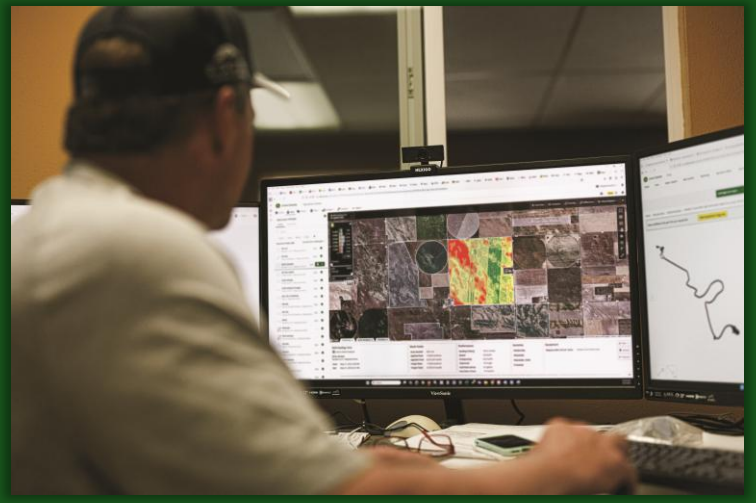
Photos courtesy of Purdue University

Digital Ag Solutions – Enabling Biofuel Feedstock Reporting

Aug 2026: Digital Fields tools released for farmers, researchers, leaders

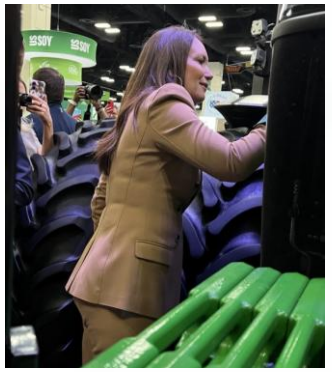
Next: JD Operations Center enhancements tailored to biofuel feedstock programs

- Updating Ops Center CI Calculator based on new 45Z USDA GREET model
- Machine-collected information is primary data source for 45Z Feedstock reporting
- Enable farmer 45Z Feedstock reporting via Ops Center permissioned API Solutions



Demonstrating biofuel potential and highlighting farmer practices is where Deere makes the biggest impact

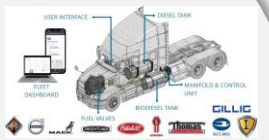
Policy Influence



Argonne NATIONAL LABORATORY

Industry Leadership

JOHN DEERE



CERTIFIED WINTER CANOLA PROGRAM

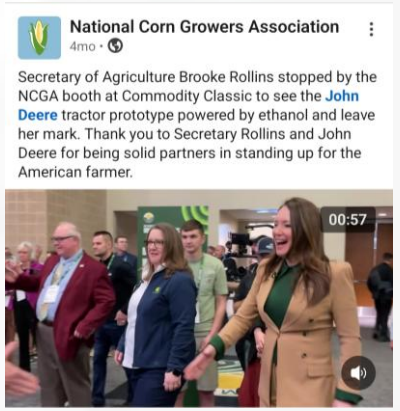
PURDUE UNIVERSITY

POWERED BY B30 BIODIESEL

Digital Ag INNOVATION LAB

Radicle Growth

Customer Appreciation



JOHN DEERE