



# Bioenergy Feedstocks

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MONSANTO



# The DAM Project

## Stover project structure and scope

"Sustainable"  
harvest

Transport

Storage

Conversion

Large scale joint work

Individual research scale work

MONSANTO  
imagine®



Feedstock  
improvement



JOHN DEERE

Improved tillage, planting  
and harvest



ADM

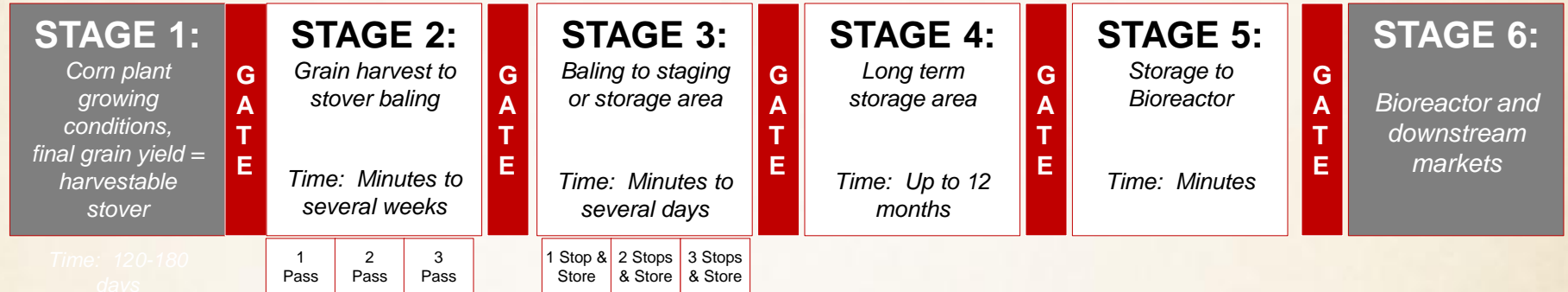
Biofuel production  
Improvement

# Corn Stover Supply Chain: Risk Mitigation Stage & Gate Process

Grower Direct Value Capture for Stover = \$25/dt  
Grower Direct Value Capture for Stover = \$25/dt

Supply Chain = \$25/dt  
Supply Chain = \$50/dt

Deliver to Bioreactor = \$50/dt  
Deliver to Bioreactor = \$75/dt



## Key Needs:

- To achieve \$50/dt supply chain, real data set for supply chain model needed with material identification and predictable quantify/quality at the reactor gate
- To achieve \$25/dry ton supply chain, likely need a step change innovation

## Key Challenge:

- Need monitoring and/or prediction tools at millions of ton scale

# DAM 2.0 Project Goal:

## *Demonstrate a Robust Supply Chain that Cost-Effectively Delivers Quality-Specified Corn Stover*

### **DAM 2: Draft Objectives**

1. Develop a business model that can be profitably operated at \$6/bu corn and at \$4/bu corn
2. Develop a supply chain strategy to deliver year round supply of quality corn stover to a bioreactor at \$50/dt (short term) and \$25/dt (long term)
  - A. Identify and develop strategies to mitigate losses in quality
  - B. Identify and develop strategies to mitigate losses in quantity
3. Identify “real-time” assessment tools to measure and predict quality and quantity of stover coming to central processing facility
4. Develop stover harvest sustainability standards
  - A. To meet the needs of the grower
  - B. Longer term, to enable downstream market development
  - C. Stage 2: Just after grain harvest
  - D. Stage 3: During stover harvest
  - E. Stage 4: During stover storage
  - F. Stage 5: From storage to bioreactor