

# *Farm Management Decisions in a Volatile Economic Climate*

**Chad Fiechter**

Indiana Certified Crop Advisor Conference 2025



Agricultural Economics

# ECONOMIC SITUATION

# Outlook - Corn

U.S. Marketing Year Average Corn Price and Ending Stocks to Use Ratio  
USDA - WASDE Reports

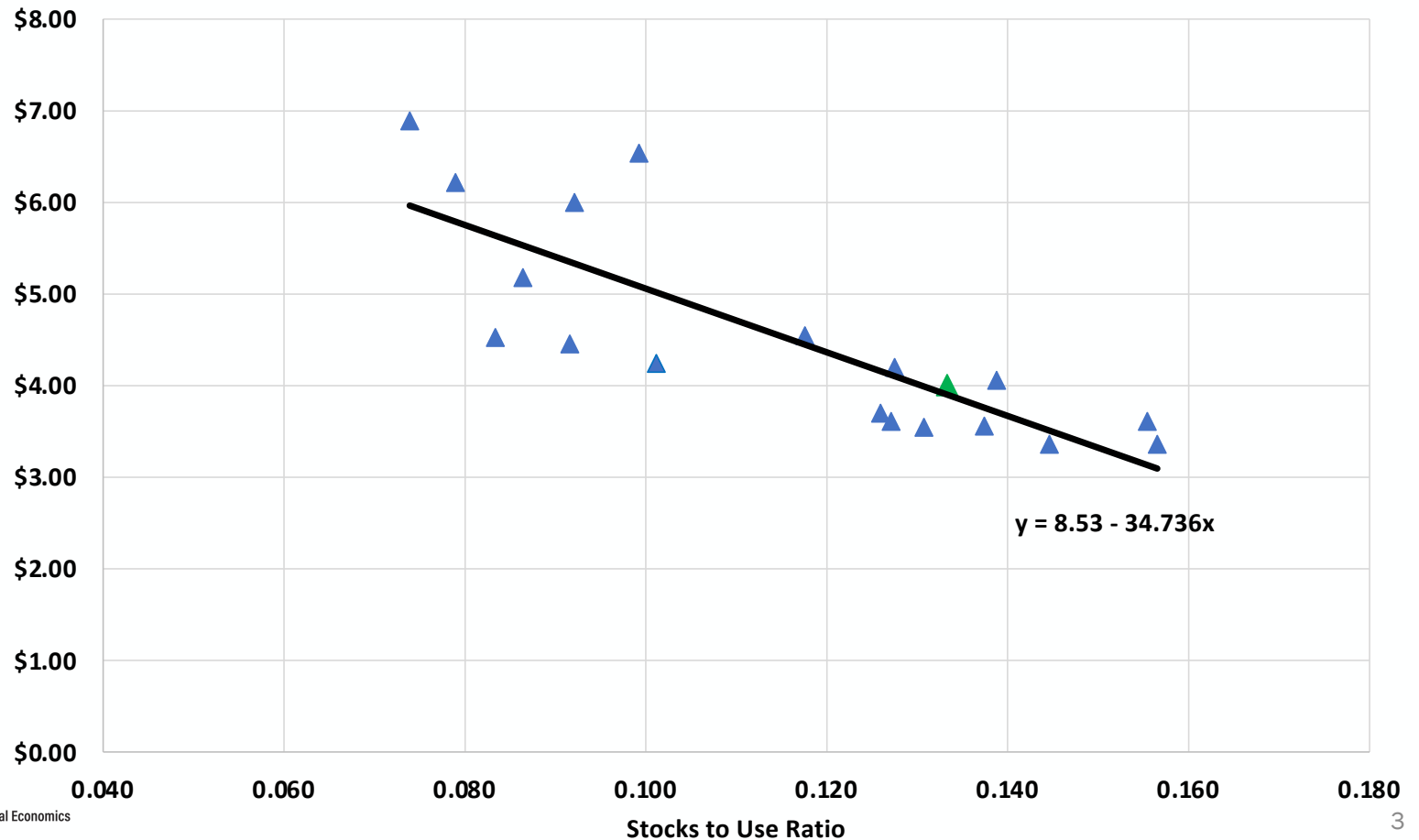
Average Stocks to  
Use: 11.6%

Average price:  
\$4.51

DEC WASDE (down)  
Stocks to Use  
12.1%  
(10.1% in 24/25)

Price  
\$4.00  
(\$4.24 in 24/45)

Chart: Michael  
Langemeier



# Outlook - Soybeans

U.S. Marketing Year Average Soybean Price and Ending Stocks to Use Ratio  
USDA - WASDE Reports

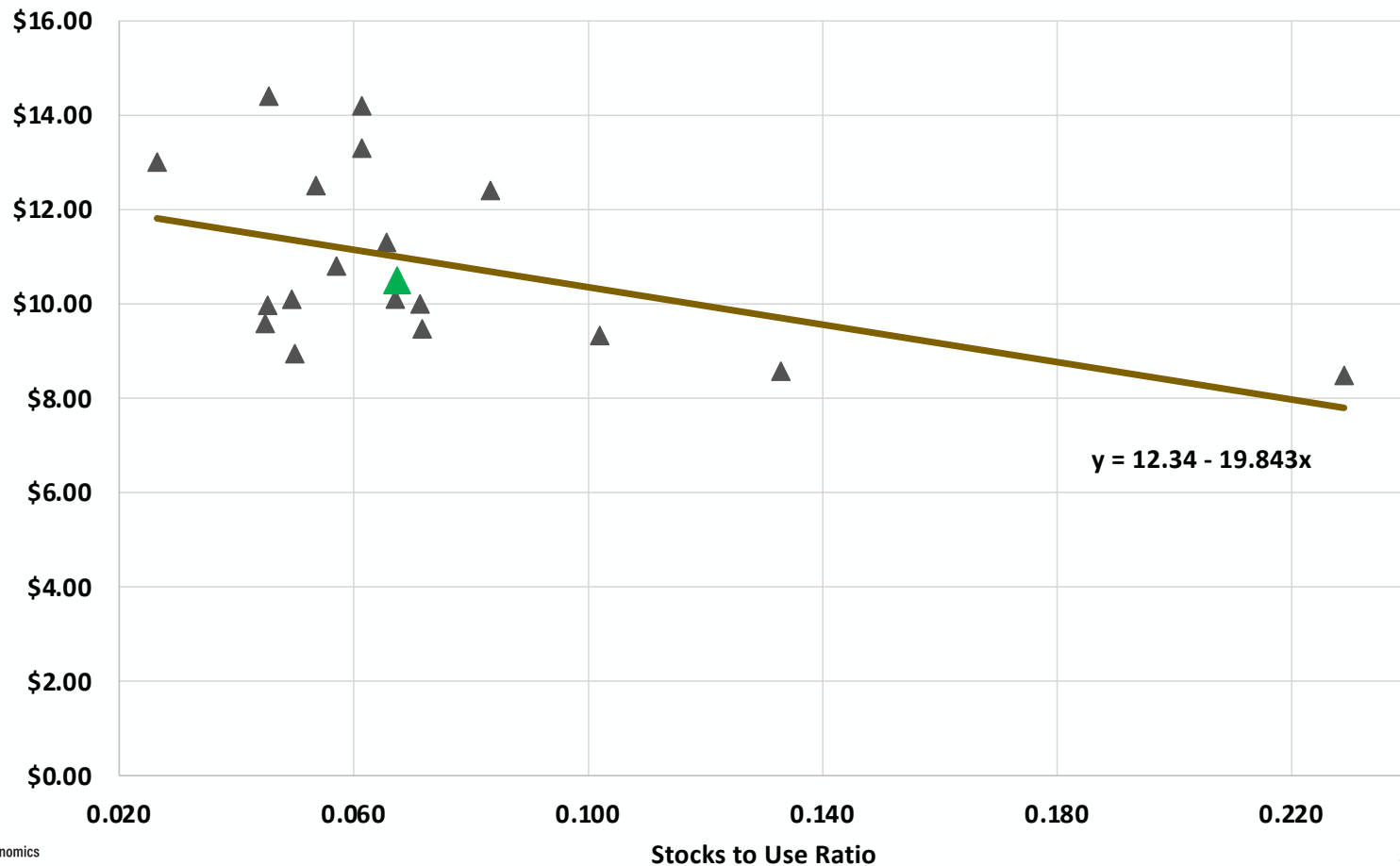
Average Stocks to Use: 7.3%

Average price: \$10.89

DEC WASDE (unchg)  
Stocks to Use  
6.7%  
(7.1% in 24/25)

Price  
\$10.50  
(\$10.00 in 24/45)

Chart: Michael  
Langemeier



# Outlook – Cash Rent Prices

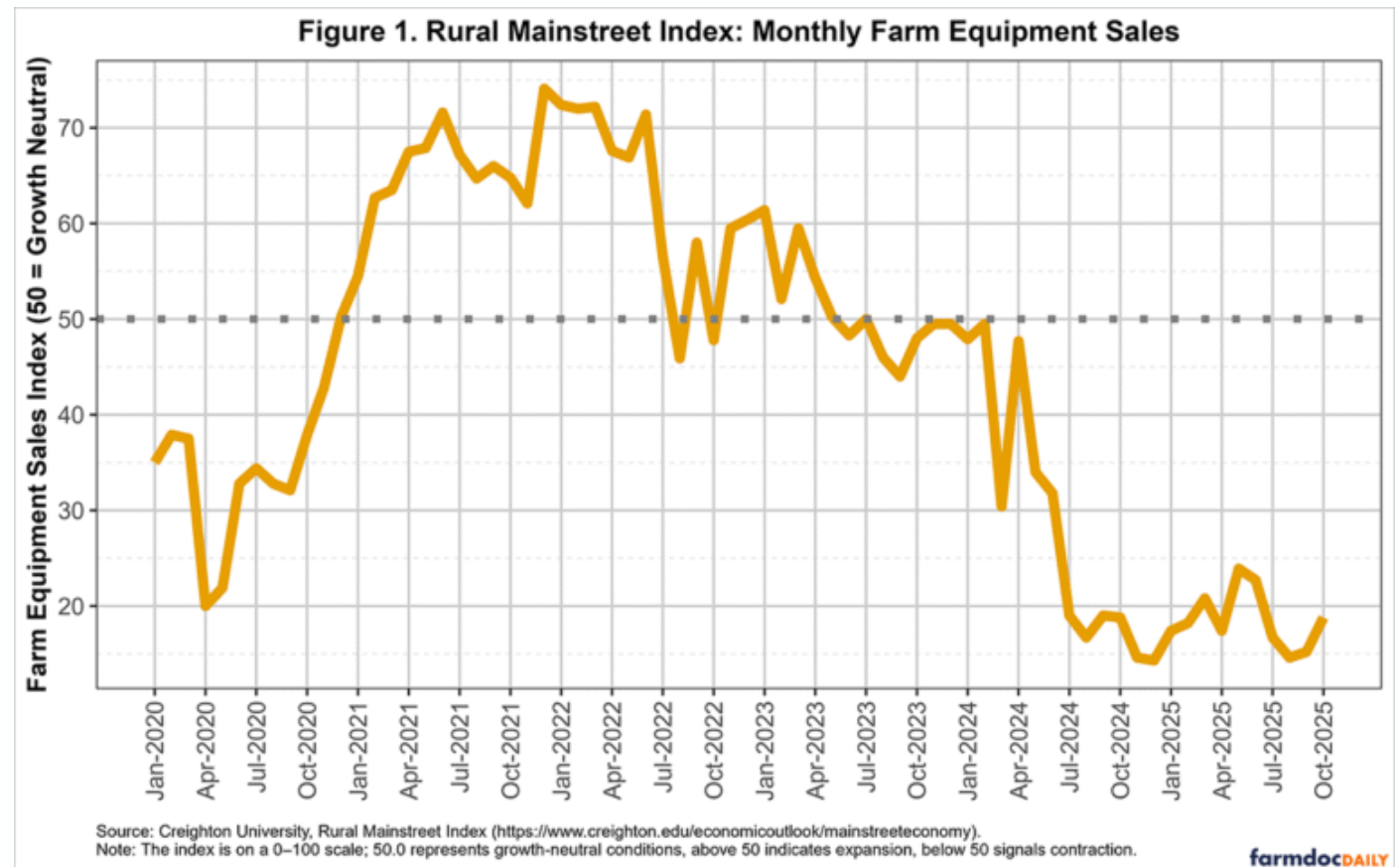
2025 Survey Results, State Averages by Land Quality

Land Quality	Yield (Bu/Ac)	2024 Value (\$/A)	2024 Value (\$/A)	Percent Change
Top	230	\$313	\$318	1.7%
Average	199	\$260	\$264	1.6%
Poor	170	\$204	\$207	1.5%

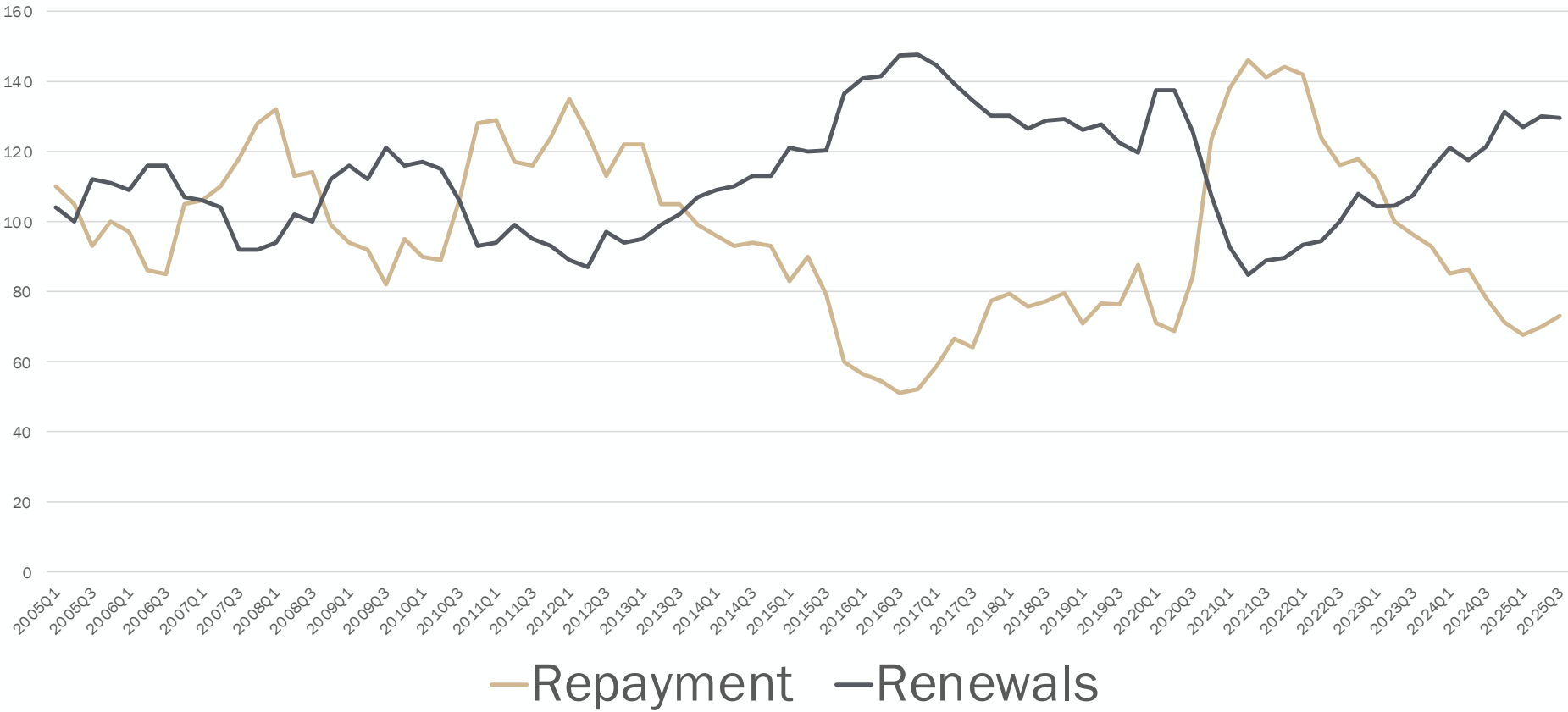
Cash rental rates are slow to adjust.

# Outlook – Equipment

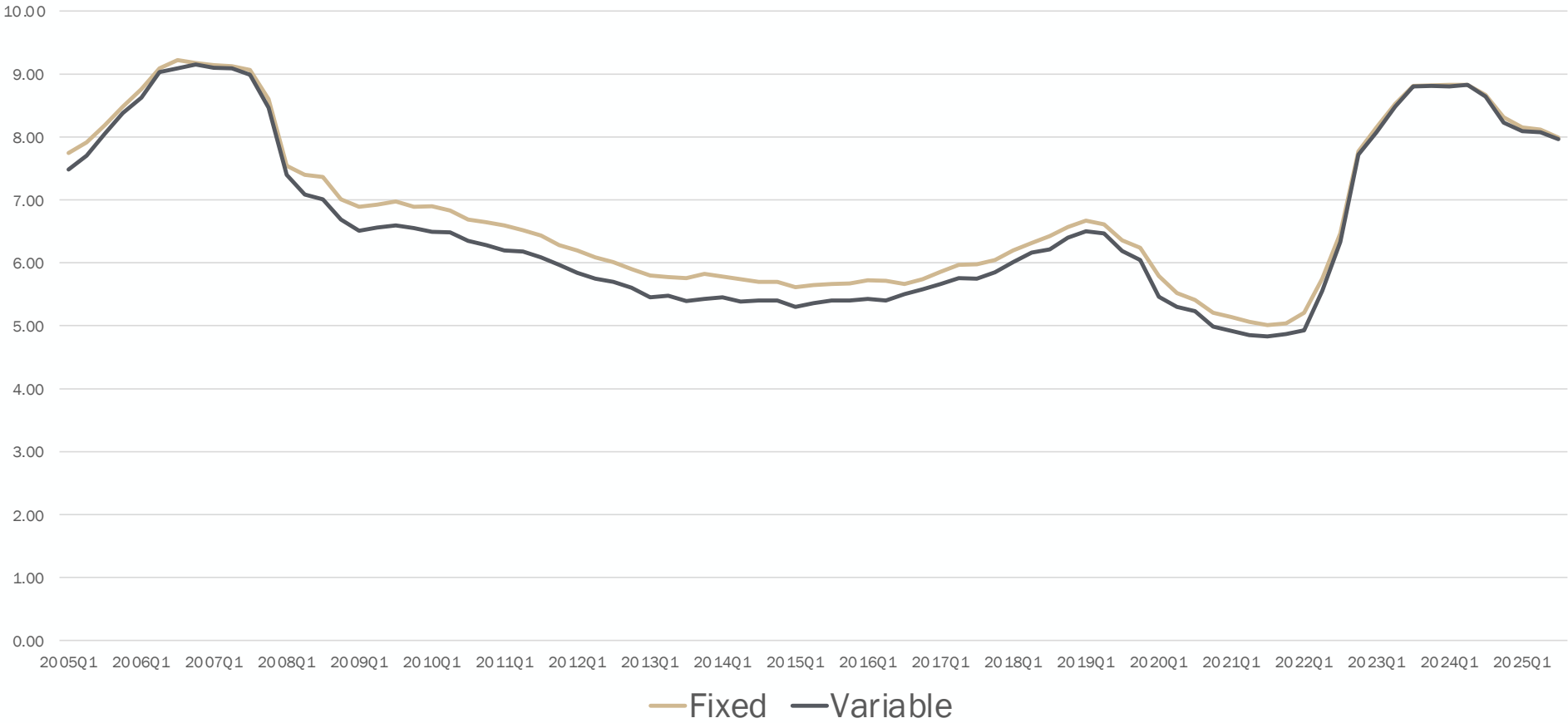
On average – not much  
machinery buying



# Agricultural Credit – Federal Reserve Bank of Kansas City



# Interest Rates- *Federal Reserve Bank of Kansas City*





# Outlook – Land Prices

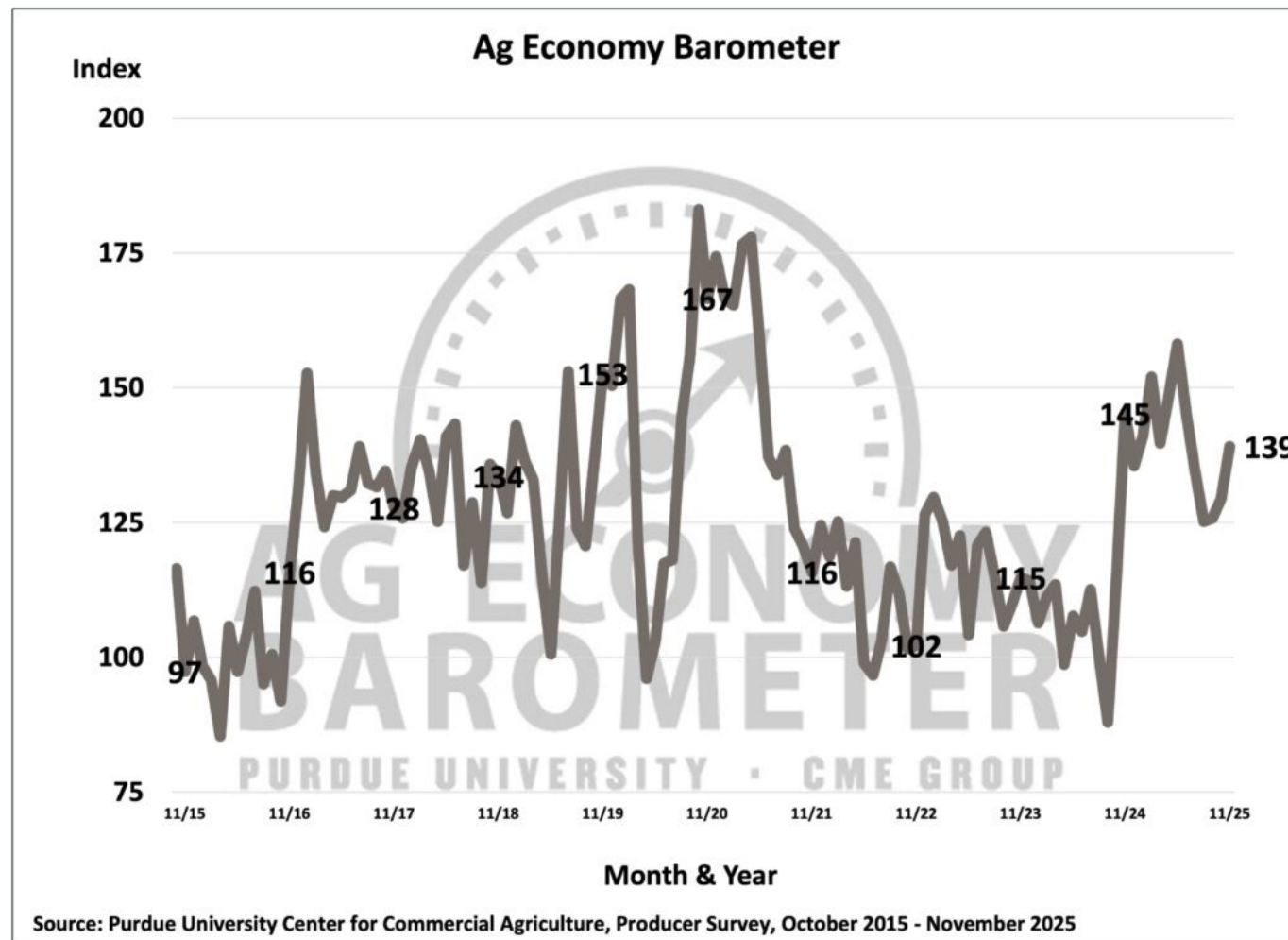
2025 Survey Results, State Averages by Land Quality

Land Quality	Yield (Bu/Ac)	2024 Value (\$/A)	2025 Value (\$/A)	Percent Change
Top	230	\$14,392	\$14,826	3.0%
Average	199	\$11,630	\$12,254	5.4%
Poor	170	\$9,071	\$9,761	7.6%

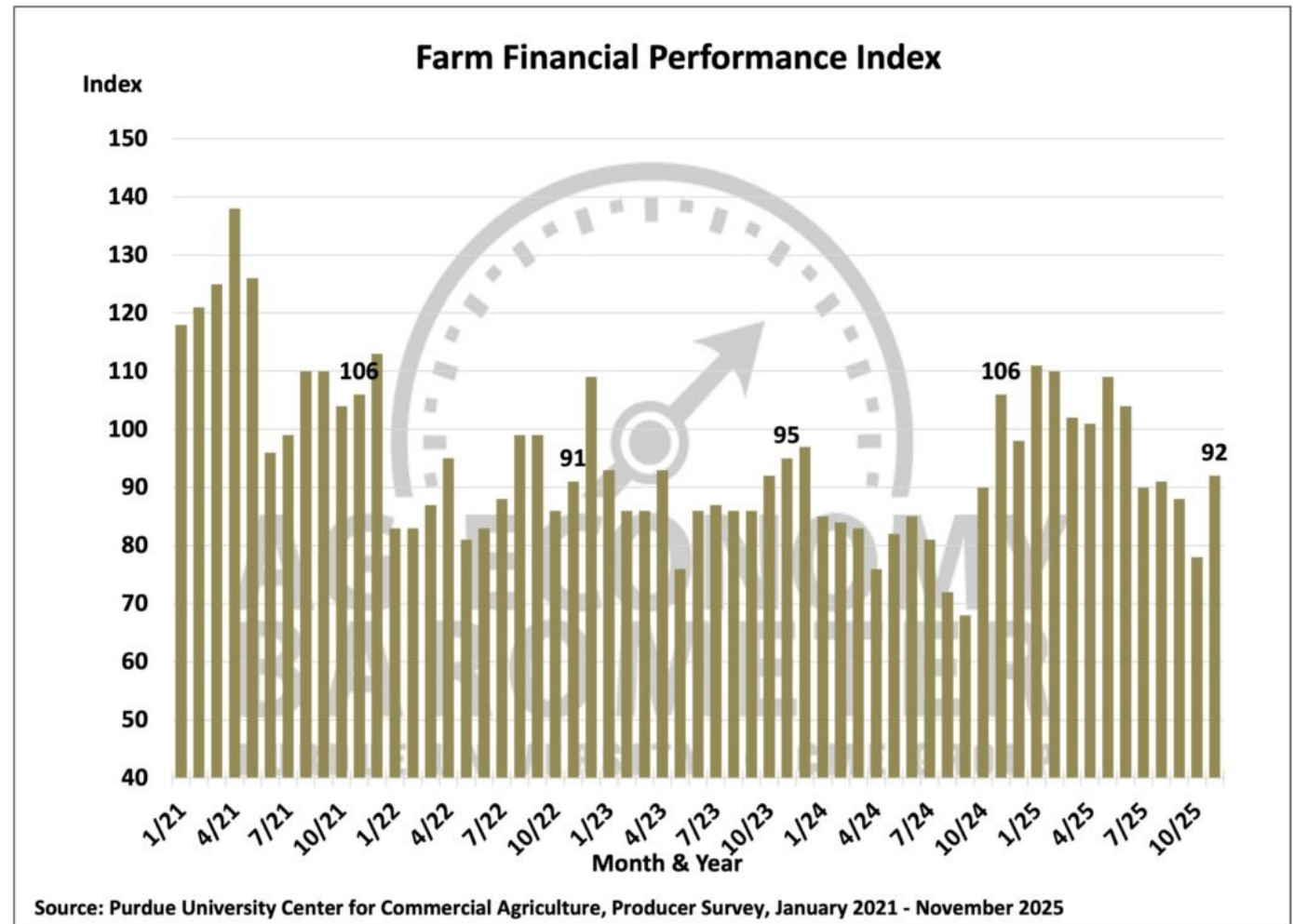
How deep are land buyer's pockets?

# FARMER SENTIMENT

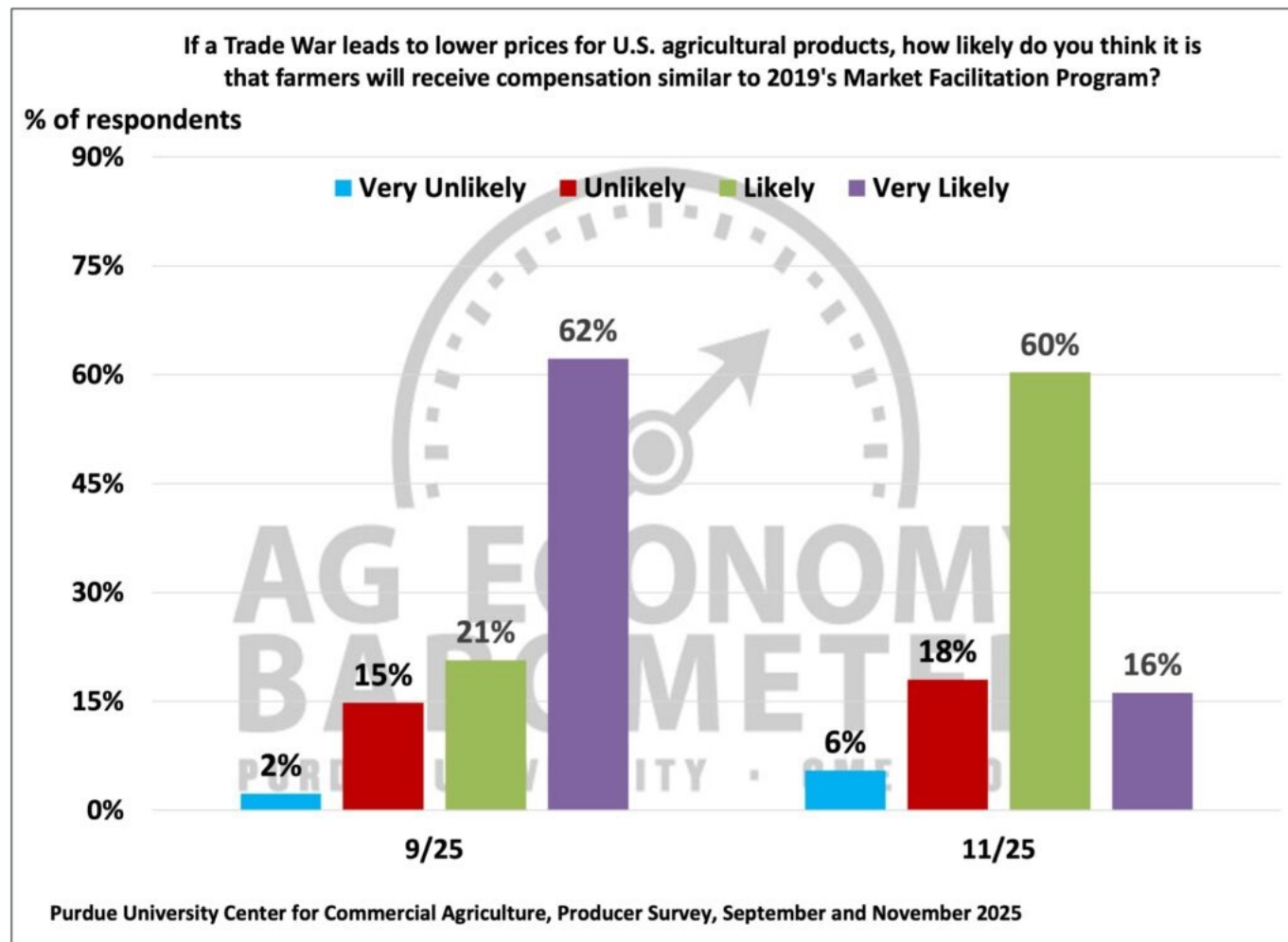
*Despite low crop prices – farmer sentiment remains relatively high*



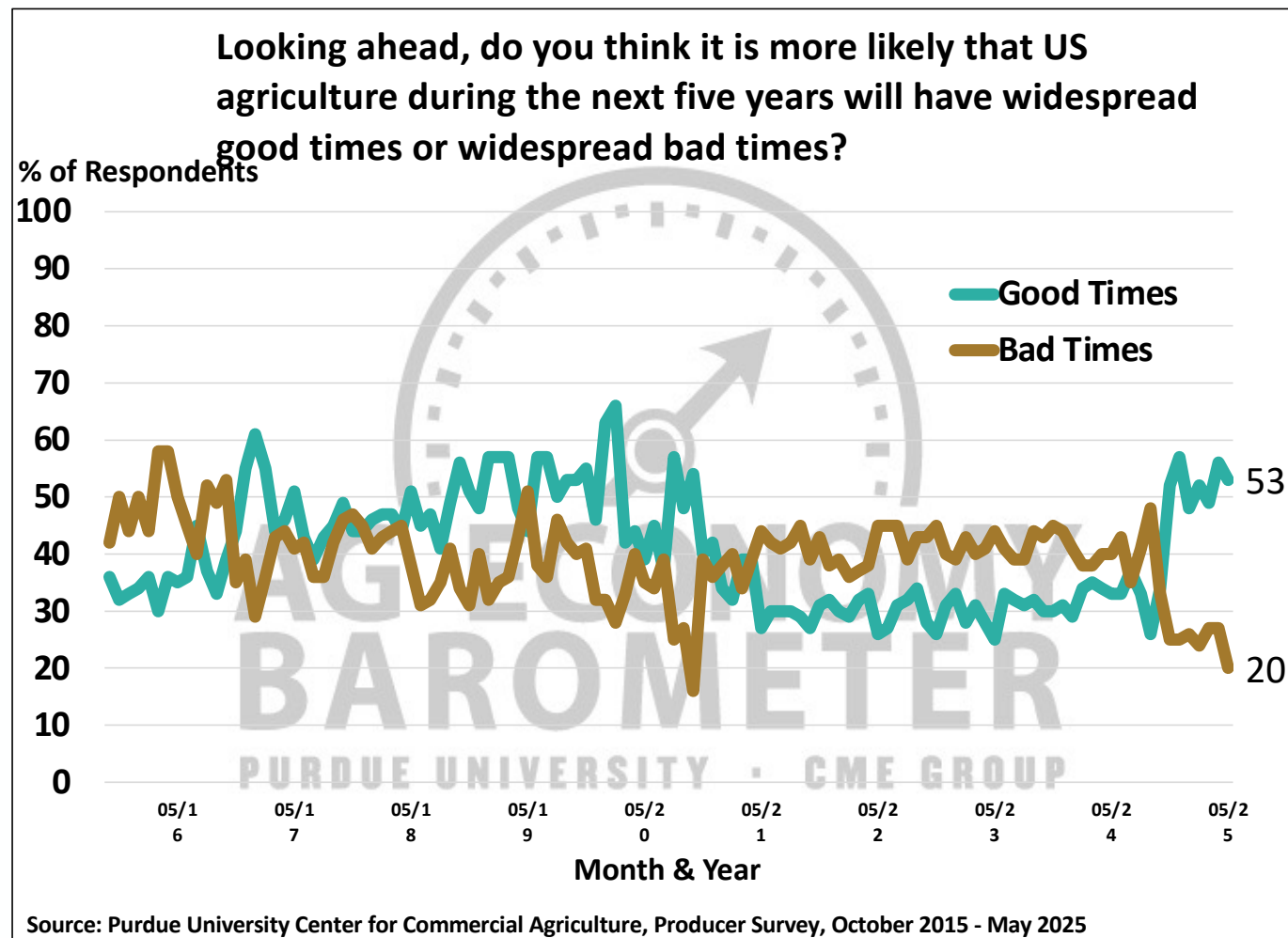
*Recent uptick likely  
related to price  
improvements*



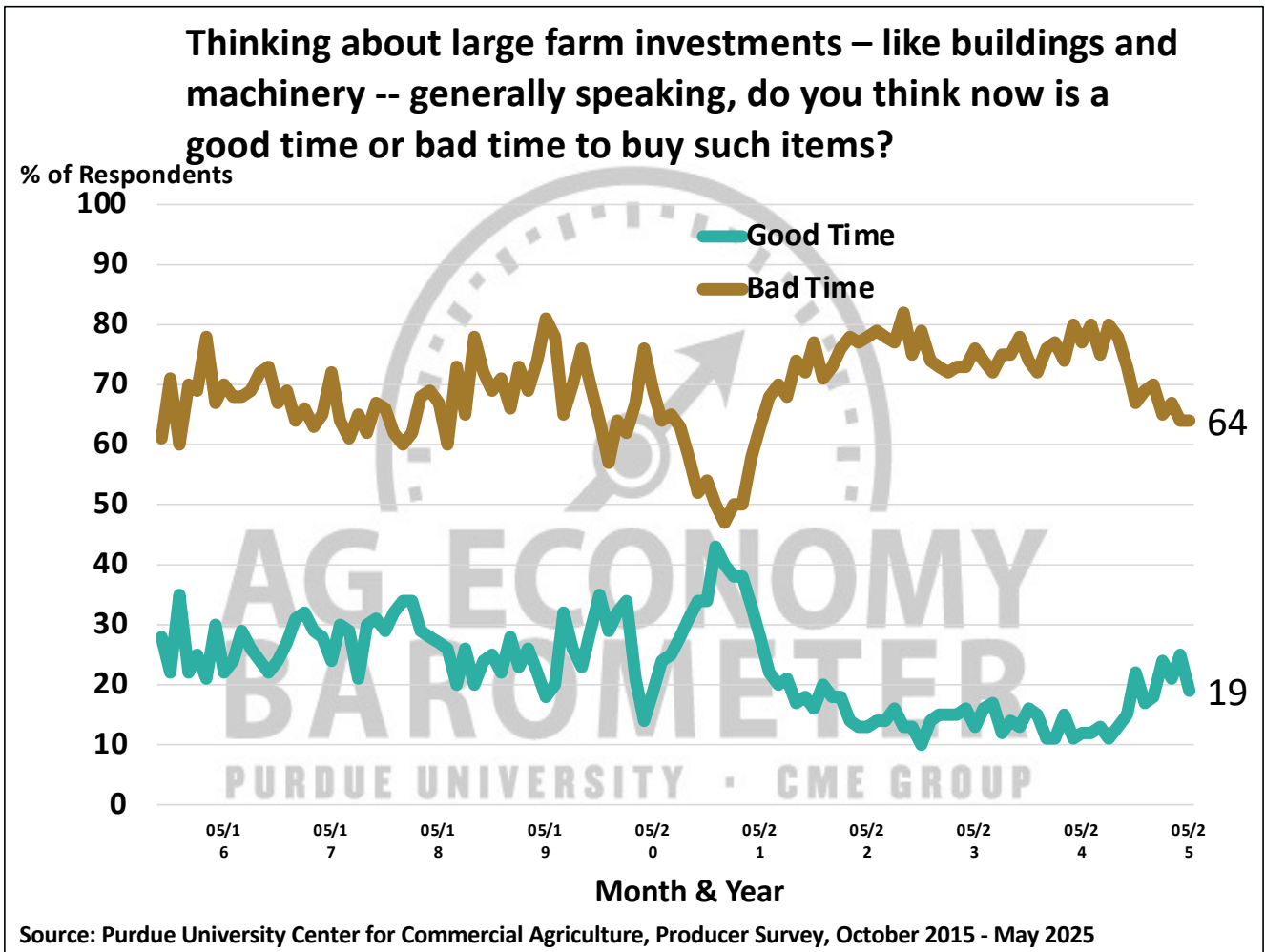
*Farmers confident in  
govt support*



*Farmers are long-term decision makers*



*Farmers consider a “good time” a time when they have buying power*

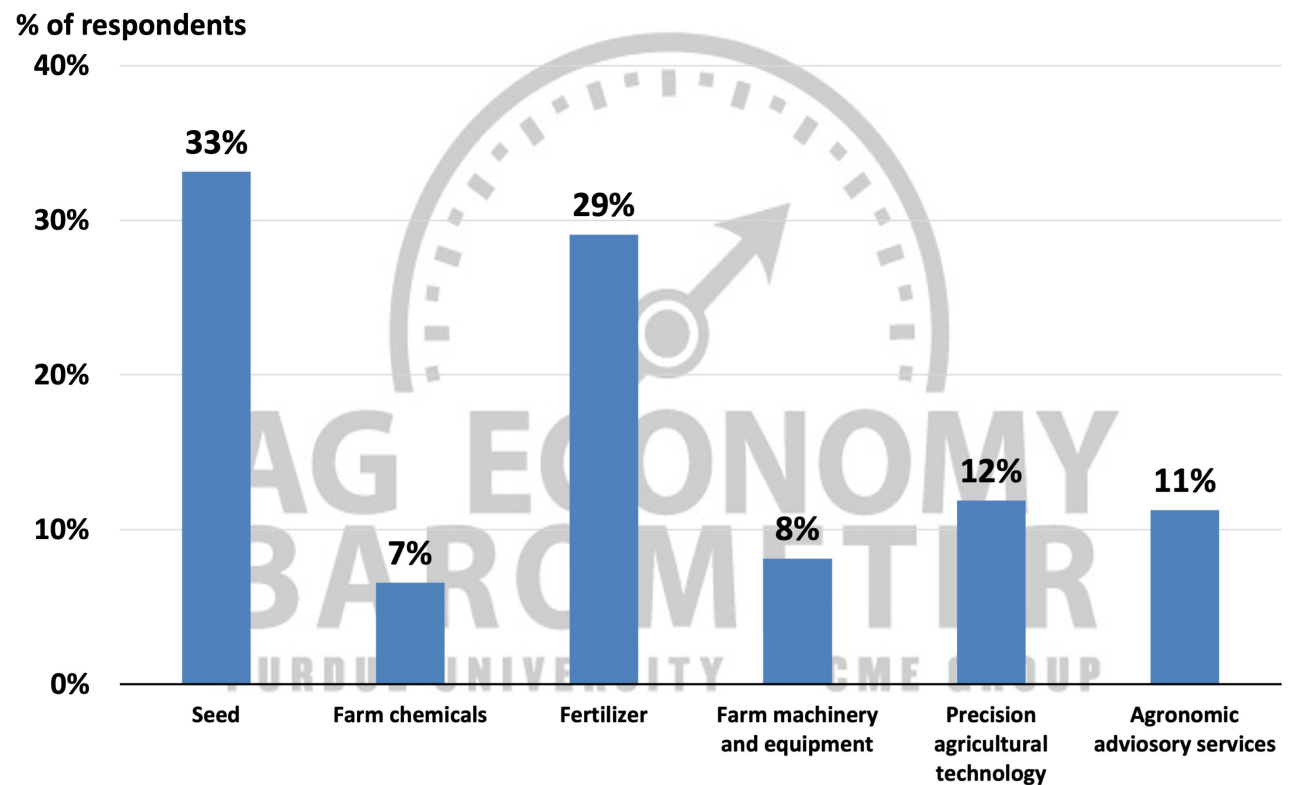


# WHAT BEHAVIOR DO WE EXPECT?



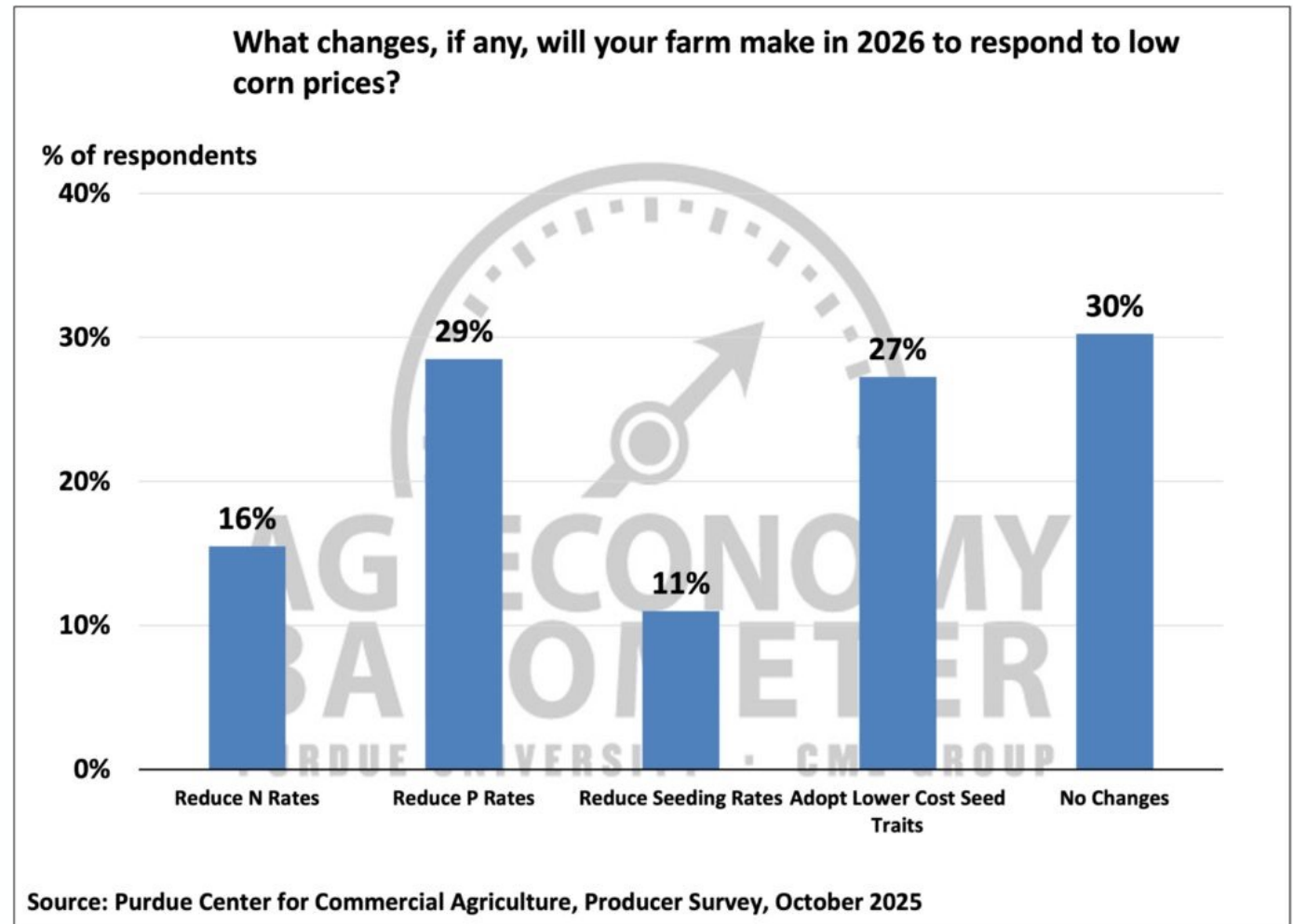
# Generating value for farmers

Considering the price you pay and the value generated on your farm, which of the following inputs do you believe provides the best overall value?

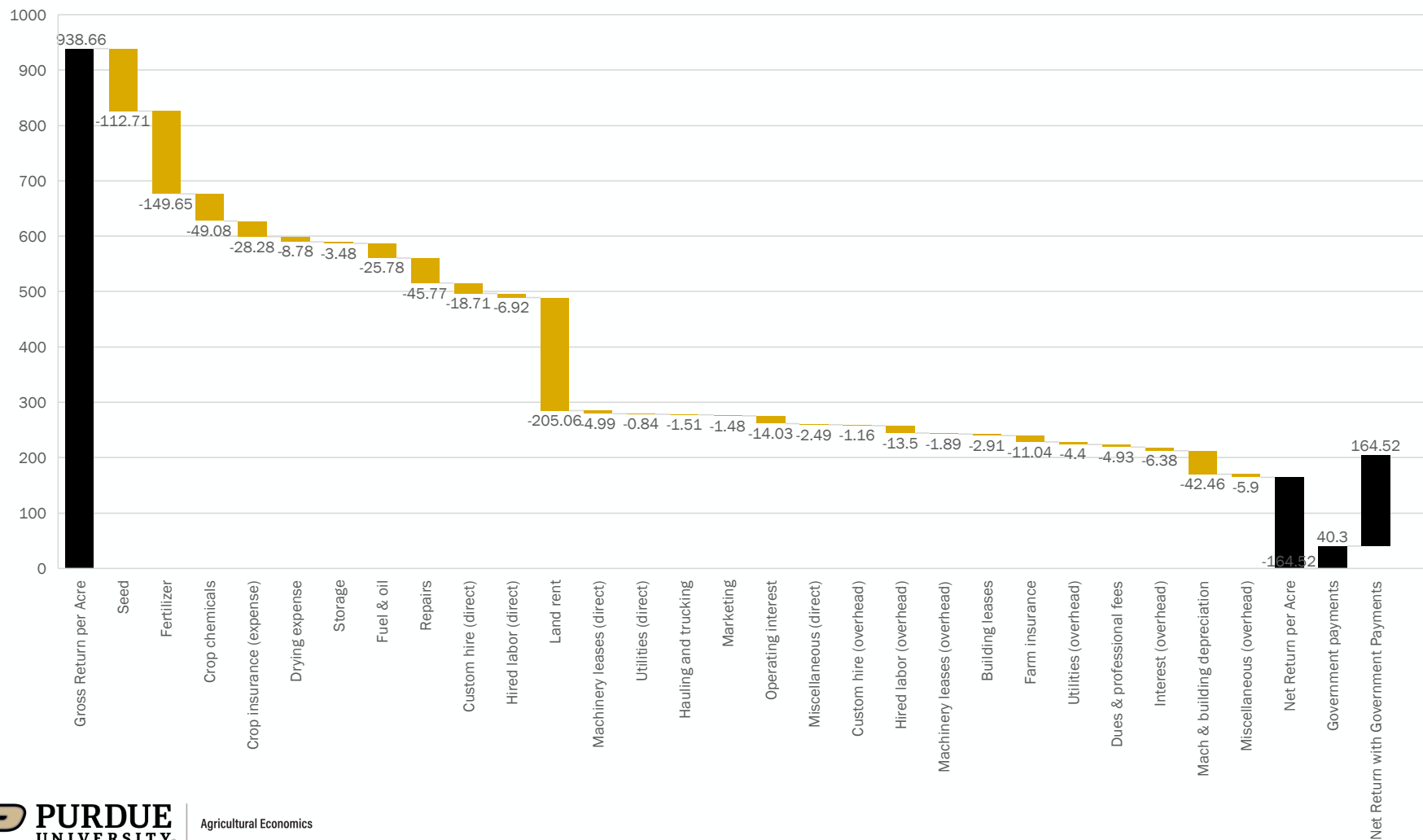


Source: Purdue Center for Commercial Agriculture. Producer Survey. June 2025

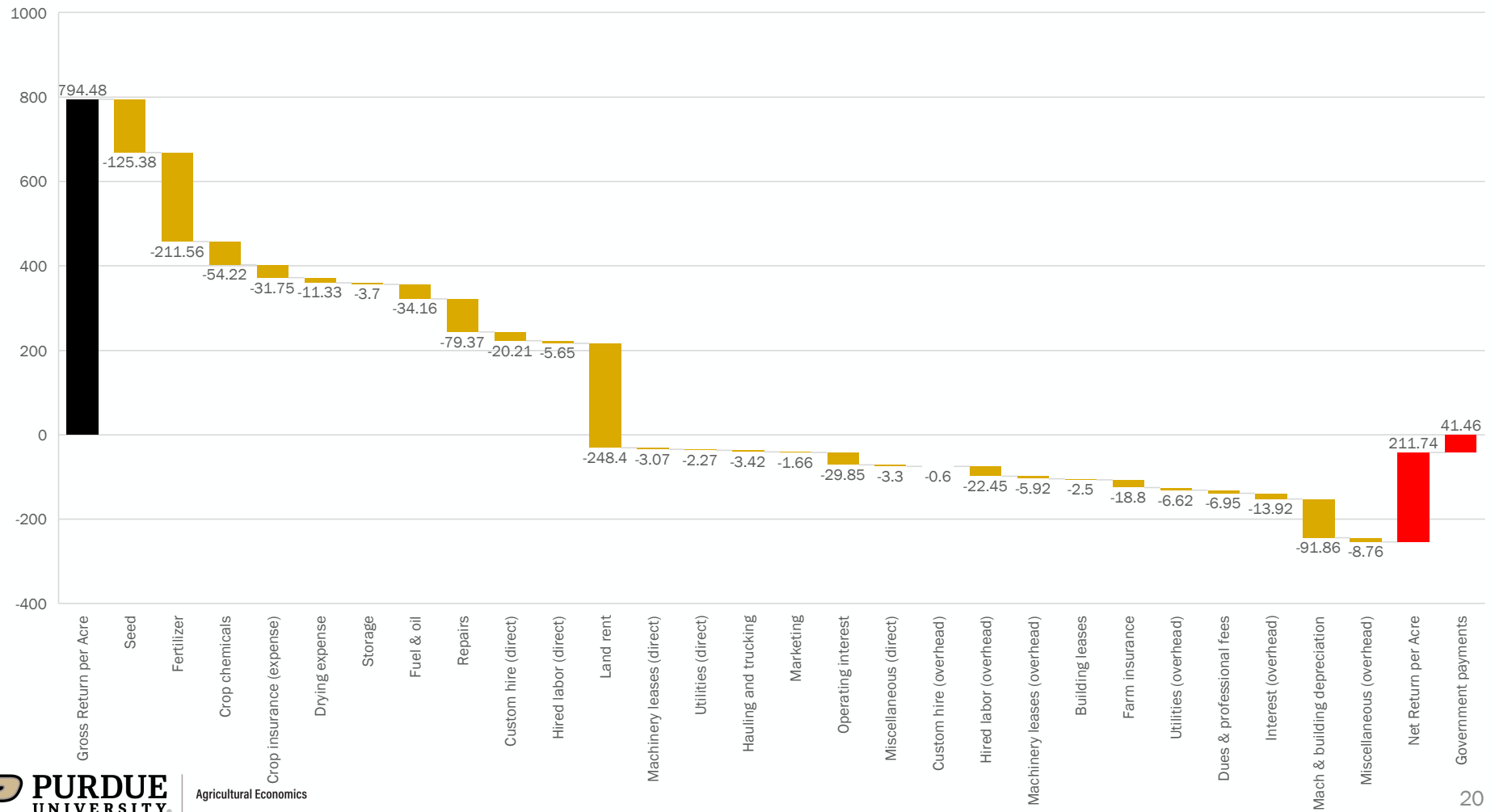
Substitution?



## 2024 Income Statement Top 20% of Producers in FINBIN dataset

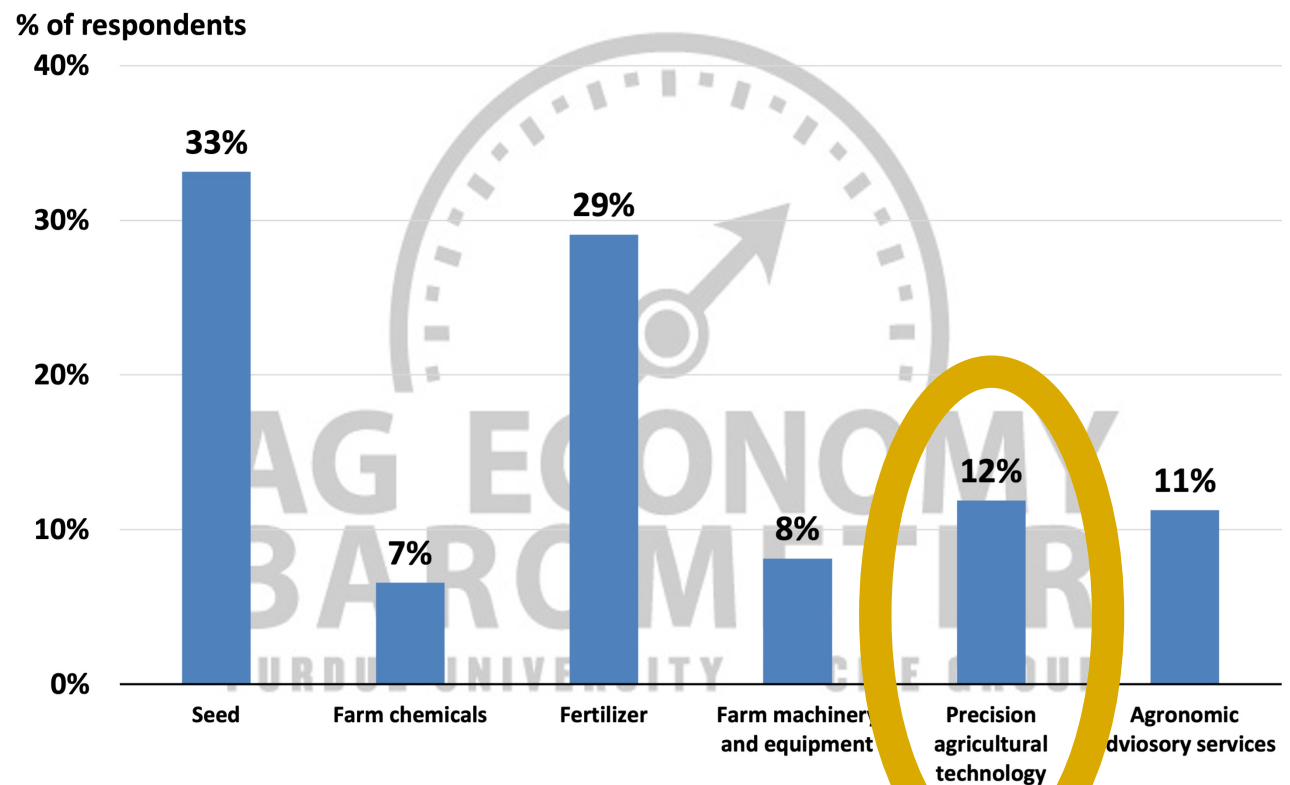


## 2024 Income Statement Bottom 20% of Producer in FINBIN dataset



# Generating value for farmers

Considering the price you pay and the value generated on your farm, which of the following inputs do you believe provides the best overall value?



Source: Purdue Center for Commercial Agriculture. Producer Survey. June 2025

# WHERE DOES TECH FIT?



The economics of US row crop production with large-scale autonomous machines<sup>☆</sup>

Joshua Strine<sup>a,\*, 15</sup>, Chad Fiechter<sup>a,\*, 15</sup>, James Lowenberg-DeBoer<sup>b</sup>

<sup>a</sup> Department of Agricultural Economics, Purdue University, West Lafayette, Krannert Bldg, 403 Mitch Daniels Blvd, West Lafayette, IN 47907, United States of America


<sup>b</sup> Harper Adams University, Newport, Shropshire, TF10 8NB, UK

- Current large scale machines
  - Less than 80% as efficient as human operators
  - Require some amount of human intervention
  - Likely associated with per acre per pass subscription fee
  - Likely fixed hardware costs of 30K to 60K

According to the model:  
Autonomous Farming is better if **labor rates are greater than \$140**

RESEARCH ARTICLE

## Farm Efficiency and Precision Agriculture Technology

Chad Fiechter<sup>1</sup> , Brady Brewer<sup>2</sup>, Jennifer Ifft<sup>3</sup> and Michael Boehlje<sup>1</sup>

<sup>1</sup>Department of Agricultural Economics, Purdue University, West Lafayette, IN, USA, <sup>2</sup>Department of Agricultural Economics, Kansas State University, Manhattan, KS, USA and <sup>3</sup>Flinchbaugh Agricultural Policy Chair, Department of Agricultural Economics, Kansas State University, Manhattan, KS, USA

**Corresponding author:** Chad Fiechter; Email: [cfiechte@purdue.edu](mailto:cfiechte@purdue.edu)

Precision agriculture technology is not an important driver of farm efficiency.

Inefficient farms experience the most benefit.

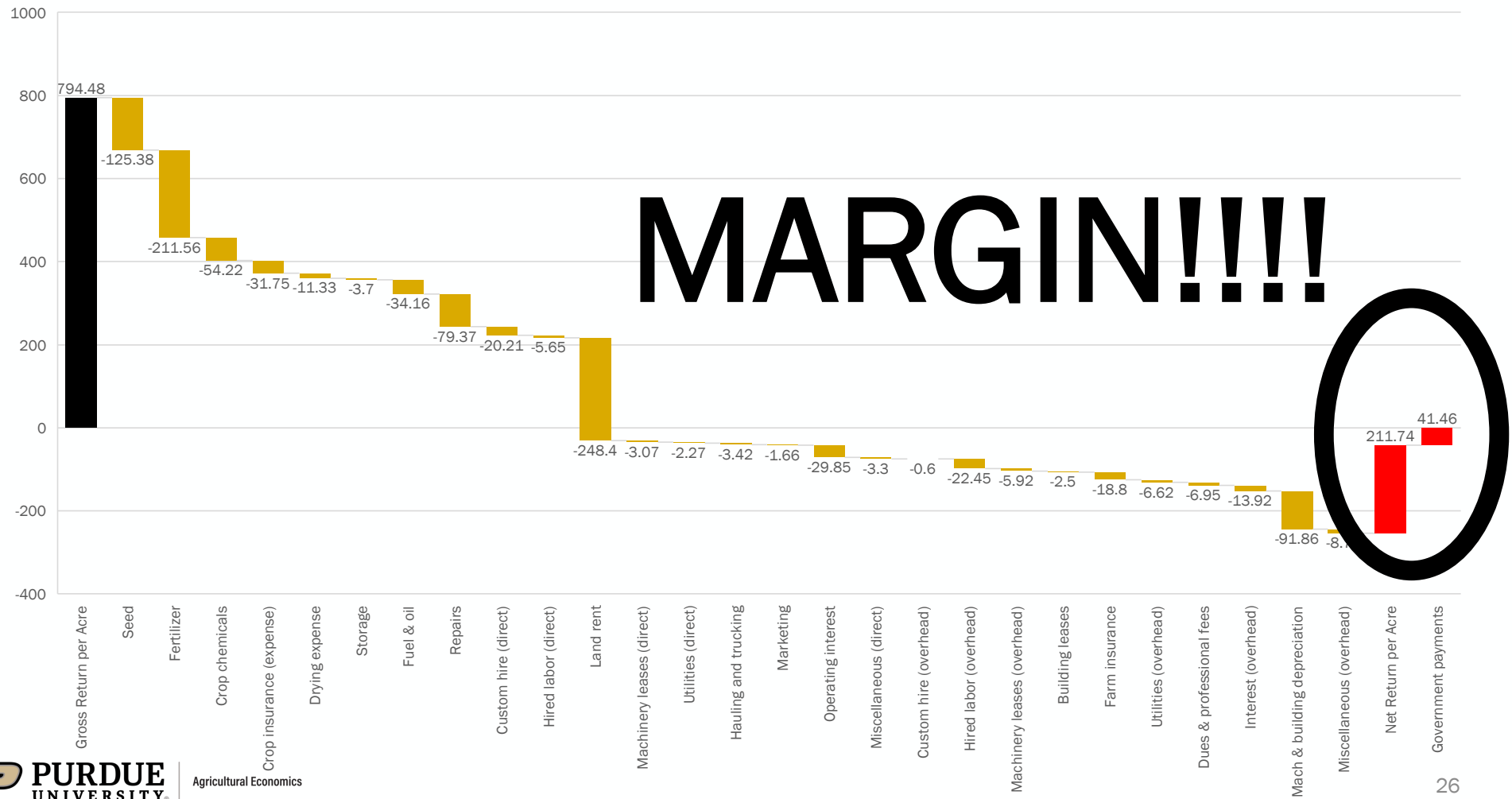


# *How about AI?*



Created by ChatGPT 5.1  
*I want an image of a farmer  
running to not be left behind a  
bus that is leaving.*

## 2024 Income Statement Bottom 20% of Producer in FINBIN dataset



# ***If I was giving this presentation to farmers...***

## *Facets of farm management*

- 1. Production management*
- 2. Procurement and selling*
- 3. Financial management*
- 4. Human resources*
- 5. Strategic management*
- 6. Relationships*
- 7. Leadership*
- 8. Risk Management*

*From: "Are your farm business management skills ready for the 21<sup>st</sup> century" Michael Boehlje, Craig Dobbins, and Alan Miller*

# Can we use AI to bolster farm management

**Me**

I have access to high interest checking accounts that pay 4% on cash. How should I balance using the high interest checking with the LOC?

**Assistant**

Ah, now we're talkin'—you've got a 4% interest-bearing checking account and a 7% operating line of credit (LOC). That's a 3% spread working against the LOC, so here's how to play this smart:

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 **Rule of Thumb: Borrow Only If the Cash Earns More After Tax**

Since your LOC costs you 7%, and your checking earns 4%, you're technically losing **3% annually** by using borrowed money instead of your own cash. That's about:

**Me**

I mean that I can deposit the cash into the high interest checking and receive interest...

**Assistant**

Ah, gotcha now—thanks for clearing that up. You're sayin' you can park your \$200K in a high-interest checking account earning 4%, and the question is: should you use your **Line of Credit (LOC)** for expenses while the cash sits and earns?

Let's dig into that with a simple side-by-side:

---

**Me**

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**Assistant**

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---

# *Action Plan*

- Short-run
  - Document all interactions with farmers – this is future training data.
  - Purchase a subscription to consumer LLM model (ChatGPT, Llama, Claude, Gemini, Copilot, etc...)
    - Learn to prompt
    - Identify where it simplifies life

## *Action Plan – Interaction Time*

- Long-run
  - From your perspective, what are the key challenges that your clients face?
  - From your perspective, what are the tasks that you do which provide your clients the most value?
  - If we could solve \_\_\_\_\_ my work life would be much easier.
  - If we lose \_\_\_\_\_ my work life would be much harder.

# *Takeaways*

- Outlook: some costs may be softening...minimal positivity
- Sentiment: Relatively, better than expected
- Behavior: cut easiest costs, maybe not the most prudent
- Tech: more questions than answers
  - Is the bloom off the precision ag rose?
  - Does AI change the economies of scale with respect to management?
  - Does AI change the transfer of important information?

*cfiechte@purdue.edu*

<https://ag.purdue.edu/commercialag/home/>



Agricultural Economics