DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

Agriculture and Natural Resources

FSA110

Understanding Local Grain Prices: A Guide for Arkansas Producers

Eunchun Park
Assistant Professor - Agricultural Economics and Agribusiness, Fryar Price Risk Management Center of Excellence

Key Takeaways for Risk Plan

- **Corn and Soybeans Are Different:** In Arkansas, corn cash bids are shaped more by local feed demand (poultry) while soybean bids are shaped more by export conditions and broader market uncertainty.
- **Inland Corn Farmers:** For farmers who plant away from the river, the corn basis can be more sensitive. It may feel more "jumpy" when markets turn uncertain.
- **Soybeans Move Together:** For soybeans, a disruption at a major shipping point (like river terminals or Gulf export channels) or trade news can move local bids almost statewide, whether near the river or inland.
- **Watch the "Feed-Need":** For corn, keep an eye on how aggressively feed mills are bidding. In many weeks, that local "feed-need" signal matters more than headlines from overseas.

What is "Basis" and Why Does it Change?

The price farmers receive at their local elevator (the cash bid) isn't the same as the price quoted on the Chicago futures market. The difference — local cash price minus the futures price — is called the basis. Think of basis as the market's "local flavor." It moves with local supply and demand, transportation costs, and how urgently nearby buyers need grain. This study uses Arkansas elevator prices from 2010–2024 to show when and where local bids tend to become more sensitive to market uncertainty.

To make these local forces concrete, Figure 1 maps the elevators in the sample and the state's main barge-access waterways. Locations are grouped into River Hubs (with practical barge access) and Inland Arkansas (more dependent on truck/rail). The shaded Poultry Belt in Northwest Arkansas highlights areas where distance from barge-loading points makes barge shipping less practical—an important reason local feed demand can matter more for corn bids inland.

Arkansas Is Our Campus

Visit our website at:
http://www.uaex.uada.edu

Corn: The "Chicken" Factor

In many states, proximity to a river means prices move with export news. In Arkansas, corn works differently because of the state's massive poultry industry.

The Inland Impact: The study found that Inland Corn (the yellow-shaded Poultry Belt in Northwest Arkansas) is far more sensitive to global uncertainty than locations on the river. Because Arkansas so many birds to feed, it often "imports" corn from other states. When global markets get nervous, local feed mills react quickly to protect their supply, adjusting their bids aggressively to keep the feed flowing.

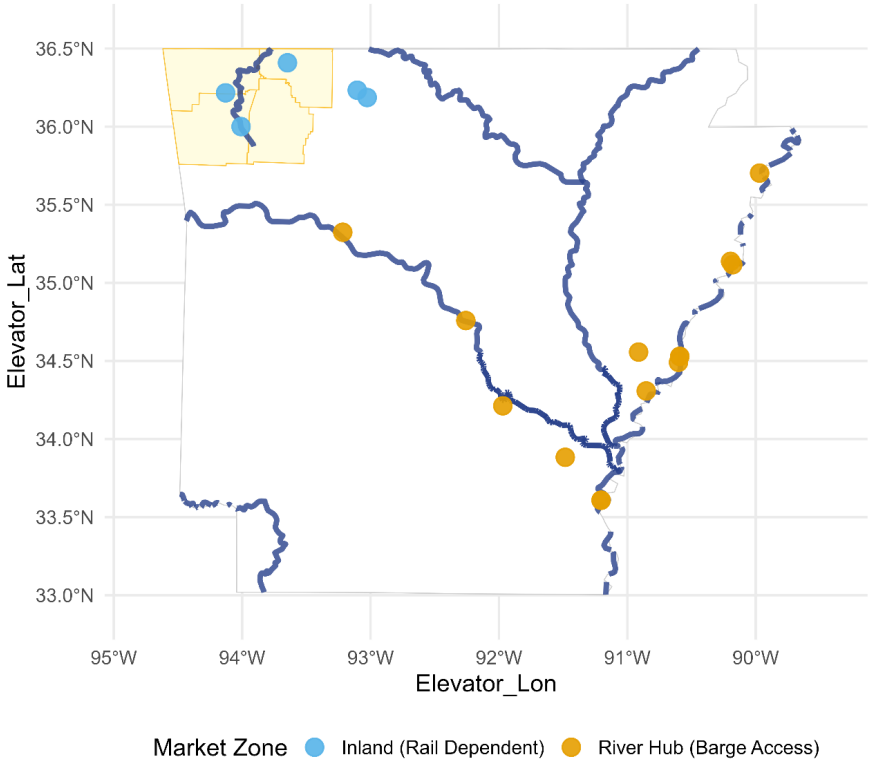

Figure 1. Location of Grain Elevators and Navigable Waterways in Arkansas. This map shows the 17 elevators used in the study, categorized into River Hubs (near the Mississippi River and Arkansas River barge channels) and Inland Arkansas. The yellow-shaded area represents the Poultry Belt, where distance from barge-loading points makes barge access impractical, creating a "logistics island" that relies primarily on truck and rail transport.

- What the math means: For Inland Corn, a 10% jump in market volatility translates to a 5.4¢ per bushel change in the local basis.
- The Bottom Line: On a 10,000-bushel contract, a nervous global market creates a $540 swing in value for inland farmers, while river farmers see almost no impact ($0).

Soybeans: All in the Same Boat

Soybeans tell a simpler story. Whether next to the Mississippi River or miles inland, soybean prices move together. While some soybeans are used locally, most price off the river-to-Gulf export channel.

The Global Highway: Because the entire state is tied to this same supply chain, the Arkansas soybean basis feels the same "waves" when global markets get rocky. A disruption at a Louisiana port or trade news from Asia will shift a local bid regardless of location.

- What the math means: Soybeans are the most "jumpy" crop. A 10% jump in volatility leads to an 11 cent to 13 cents per bushel change in basis.
- The Bottom Line: That same market nervousness creates a massive $1,100 to $1,300 swing in value for every 10,000 bushels grown.

Table 1. At-a-Glance: How Sensitive is the Local Price? *(A higher number means the local price changes more when the world market gets "nervous.")*

Crop	Location Group	Sensitivity (Beta)	Impact of 10% Volatility Jump	Who Moves the Price?
Corn	River Hub	-17.659	~0¢ (Stable)	River Barges / Exports
Corn	Inland AR	53.569*	~5.4¢	Local Poultry Mills
Soybeans	River Hub	127.407*	~12.7¢	Global Export Markets
Soybeans	Inland AR	110.847*	~11.1¢	Global Export Markets

Note: Beta represents the change in cents per bushel for a one-unit change in volatility. Asterisks (*) indicate results are statistically significant.

Summary

Analysis of monthly data from 2010 to 2024 shows that location matters differently for each crop. For corn, the inland "Poultry Belt" is the most sensitive area, meaning farmers there should watch local feed demand closely. For soybeans, the entire state acts as one single zone tied to the global export market. By knowing if a crop is driven by the "internal engine" of poultry or the "external gateway" of the river, farmers can make better decisions on when to lock in local prices

Data Sources

- Local Elevator Spot Prices (2010–2024)
- USDA World Agricultural Supply and Demand Estimates (WASDE)
- Federal Reserve Economic Data (FRED)

DR. EUNCHUN PARK is an assistant professor - agricultural economics and agribusiness at the Fryar Price Risk Management Center of Excellence, University of Arkansas, Fayetteville.

FSA110-PD-04-2026