



# FARMERS DELIVER VALUE THROUGH INFRASTRUCTURE RESEARCH

The transport of corn and soybeans makes up a large portion of the cost to sellers in Indiana and around the world. Transportation delays due to poor infrastructure are responsible for almost half of the transportation costs. To remain competitive, Indiana corn and soybean farmers invest in research and projects supporting the improvement of Indiana's infrastructure, including roads, railways, bridges and more.

Transportation costs make up about **\$6** of the per ton cost of soybeans.

Of this, **\$3.30** comes from transportation delays.<sup>1</sup>



## PROVIDING DATA TO SPUR IMPROVEMENTS

Indiana Soybean Alliance and Indiana Corn Marketing Council partner with Indiana University Public Policy Institute to fund research assessing rural road and bridge needs in Indiana. The most recent study aims to document road and bridge conditions in light of the General Assembly's actions to increase funding. The 2021 study is the first that includes data for all county highway departments (that was available) and sets a statewide baseline for future studies. The data shows:

- On average, counties reported fair conditions for asphalt, chip seal and concrete pavements.
- Only three counties reported poor average ratings for asphalt and concrete pavements. Fifteen counties reported poor average ratings for chip seal pavements.
- Counties reported between 3% and 5% of bridge components—bridge decks, superstructures and substructures—as being in poor condition.
- Counties only reported 24 failed bridges and 12 bridges in imminent danger of failing—less than 1% of the county bridge inventory.
- Counties reported 62 culverts rated as being in poor condition. No culverts were identified as failing, and only one culvert was identified as being in imminent danger of failing.

## PILOTING BRIDGE ALTERNATIVES

ISA invests funds into the Soybean Transportation Coalition, which is test piloting bridge alternatives in Indiana counties. Due to this partnership funding, White county is proceeding with two major bridge repairs.

### TOP 5 INNOVATIONS FOR RURAL BRIDGE REPLACEMENT AND REPAIR<sup>2</sup>

1	Railroad Flatcar Bridges - Railroad flatcar bridges are quick and easy to install: they can be placed on existing abutments, are available in a variety of lengths, require minimal maintenance and are very economical. Cost savings: 50-60% Construction time: 15-25% faster
2	Geosynthetic Reinforced Soil-Integration Bridge System (GRS-IBS)
3	Vibratory H-Piling Drivers
4	Buried Soil Structures
5	All Steel Piers

## SOY-BASED CONCRETE DURABILITY ENHANCER BENEFITS INDIANA ROADS AND BRIDGES

Developed in Indiana, PoreShield™, is a soy-based concrete durability enhancer that benefits the environment and the Indiana economy. Studies show it extends the life of concrete 5x-9x.

- PoreShield has been used by county highway departments to treat more than 80 bridges in Indiana and many others nationally.
- INDOT has used about 10,000 gallons in total, with the most recent project using 5,500 gallons to treat 10 miles of state highway pavement joints.
- PoreShield is safe to handle and store, won't harm ground or water with overspray and requires no PPE.<sup>3</sup>

Learn more about  
farmer contributions at  
**FarmersDeliver.com**

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<sup>1</sup> Impacts of the Transportation System on Soybeans, Corn, and Related Agricultural Products, Texas A&M Transportation Institute 2020 study

<sup>2</sup> Soy Transportation Coalition

<sup>3</sup> Poreshield.com



THE FUTURE IS OURS TO GROW