

Transportation 2050

Moving Illinois agriculture to a changing world

Why the roads, rails and rivers we build today
decide what we can sell in 2050



Midwest Agriculture Conference, Federal Reserve Bank of Chicago | October 16, 2026



The shape of the argument

01

Why Illinois competes

Cheap, reliable movement is the advantage, and it was built over two centuries.

02

The market is moving

The customer that takes half our beans is shrinking. The growth is elsewhere.

03

What the research found

Three studies, nine districts, and a great deal more to move by 2050.

04

Is there a better way?

Where the grain goes now, where the system is weakest, and what it would take.

05

The opportunity

How we set the 2030, 2040 and 2050 priorities together.

Nine district profiles sit in the companion appendix: data, decisions and maps for each.

01

Why Illinois competes

Growing the crop is only half the job. Moving it is the half that decides whether we can sell it.

Transportation is the advantage

Cost to move soybeans from farm to export port, as a share of the crop's value

13%

United States (Davenport, IA via the Gulf)

25%

Brazil (North Mato Grosso via Santos)

Illinois is the largest soybean-producing state, and nearly 60% of what it grows becomes exports. Cheap, reliable movement is the reason we can compete — the result of two hundred years of investment in moving goods.

Export share: Civil Design, Inc. for ISA, March 2026. Freight comparison: USDA AMS Grain Transportation Report, March 26, 2026 (4th quarter 2025): truck and barge to the Gulf vs truck to Santos, against farm value.

Three networks, and every bushel uses at least two



Rail

Six Class I railroads serve Illinois, alongside the short lines and regionals in grey. More track miles and more railroads than any other state.



Highway

The orange lines are the federal highway freight network. The studies measure access to the 1,512-mile Illinois Primary Freight Network: 86% of soybean production sits within a 30-minute drive of it.



Waterway

Twenty-seven locks support Illinois agricultural exports, on the Illinois, the Mississippi, the Kaskaskia and the Ohio. The Illinois River carries 29% of state waterway tonnage, the Mississippi 27% and the Ohio 13%.

IDOT forecasts Ohio River tonnage down 31% and Mississippi down 6% by 2045, while the Chicago region grows 37%.

Maps reproduced from Transportation Network Evaluation of Soybean and Soy Product Movements, Civil Design, Inc. for ISA, 2023. Waterway tonnage shares and 2017–2045 forecast (all commodities): Illinois Marine Transportation System Plan, IDOT, 2021, Appendix E, Table E.1.3.

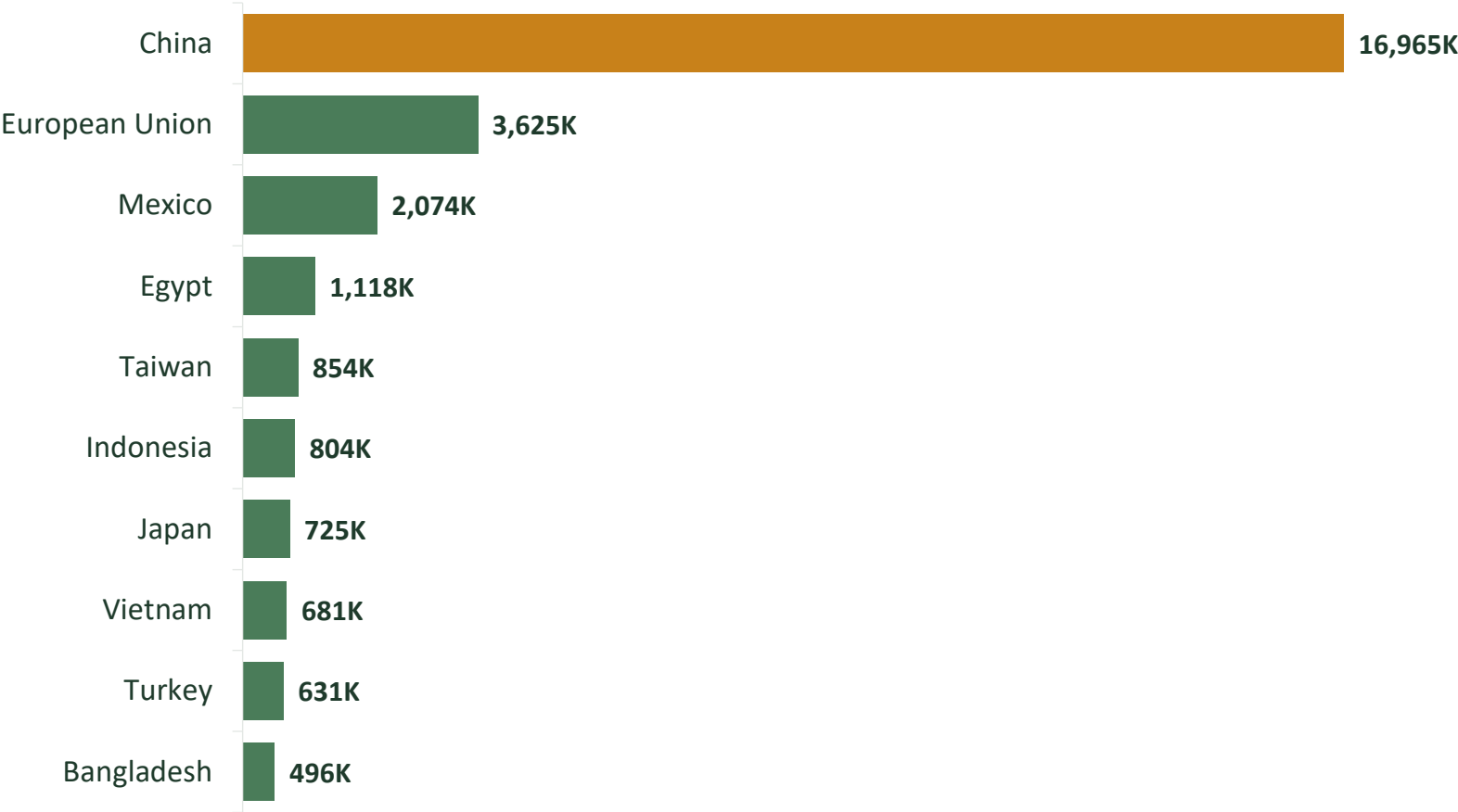
02

The market is moving

Where Illinois soy goes today, and why that will not be where it goes in 2050.

Most of what we grow leaves the country

U.S. whole soybean exports by destination, MY 2024/25 (partial year), thousand metric tons



30.2M

metric tons of U.S. whole soybeans shipped in MY 2024/25 (partial year)

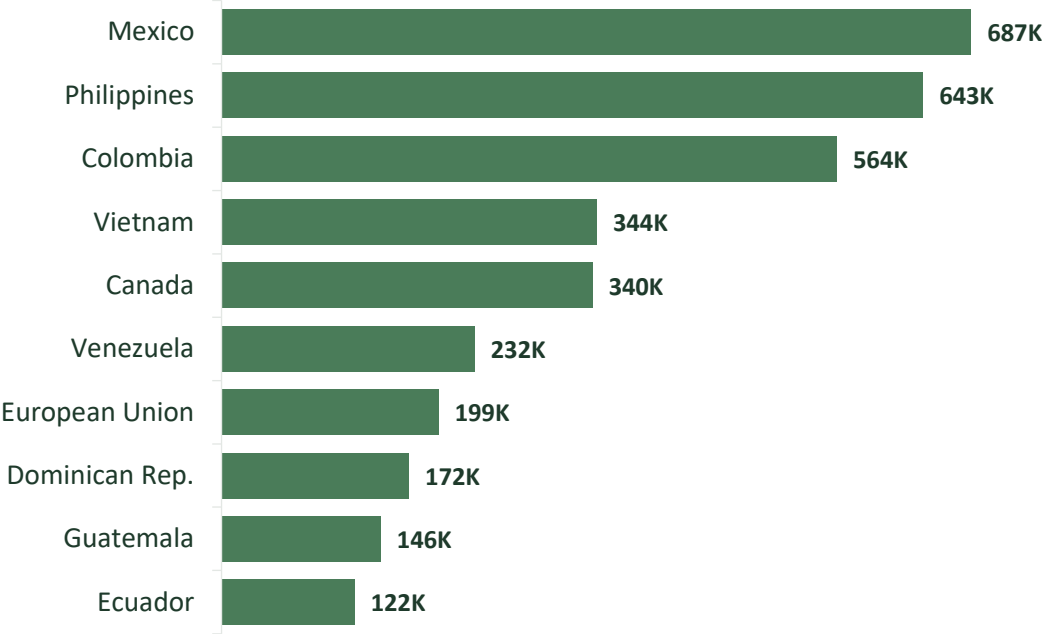
56%

of that went to a single customer — China

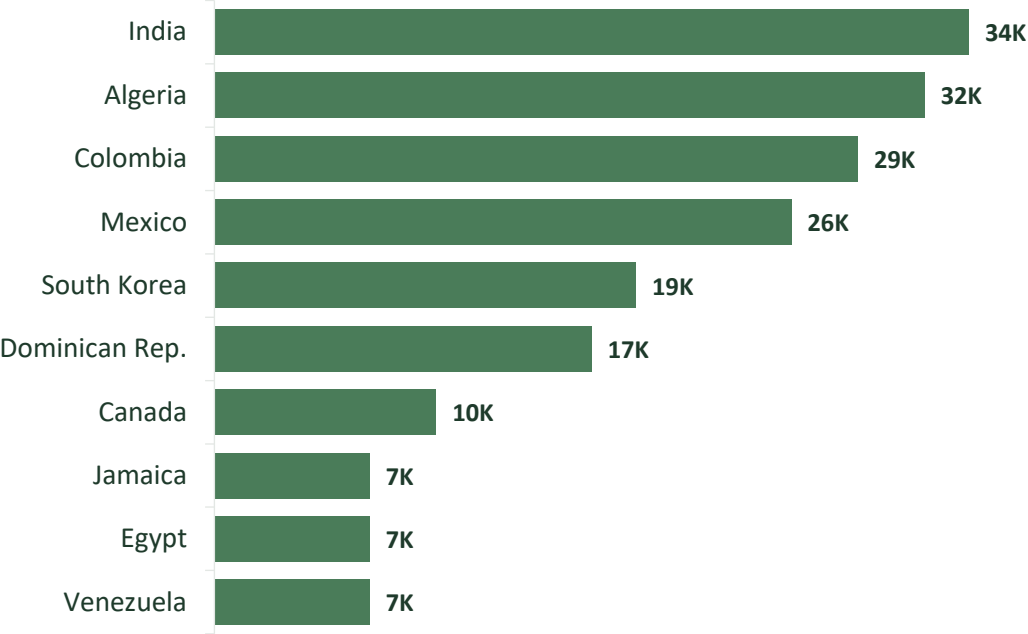
Data source: USDA/GATS. Marketing year runs Oct–Sep; MY 24/25 partial. World total 30,242,906 metric tons.

The products we make from them go elsewhere

Soybean meal, top 10 destinations (thousand metric tons)



Soybean oil, top 10 destinations (thousand metric tons)



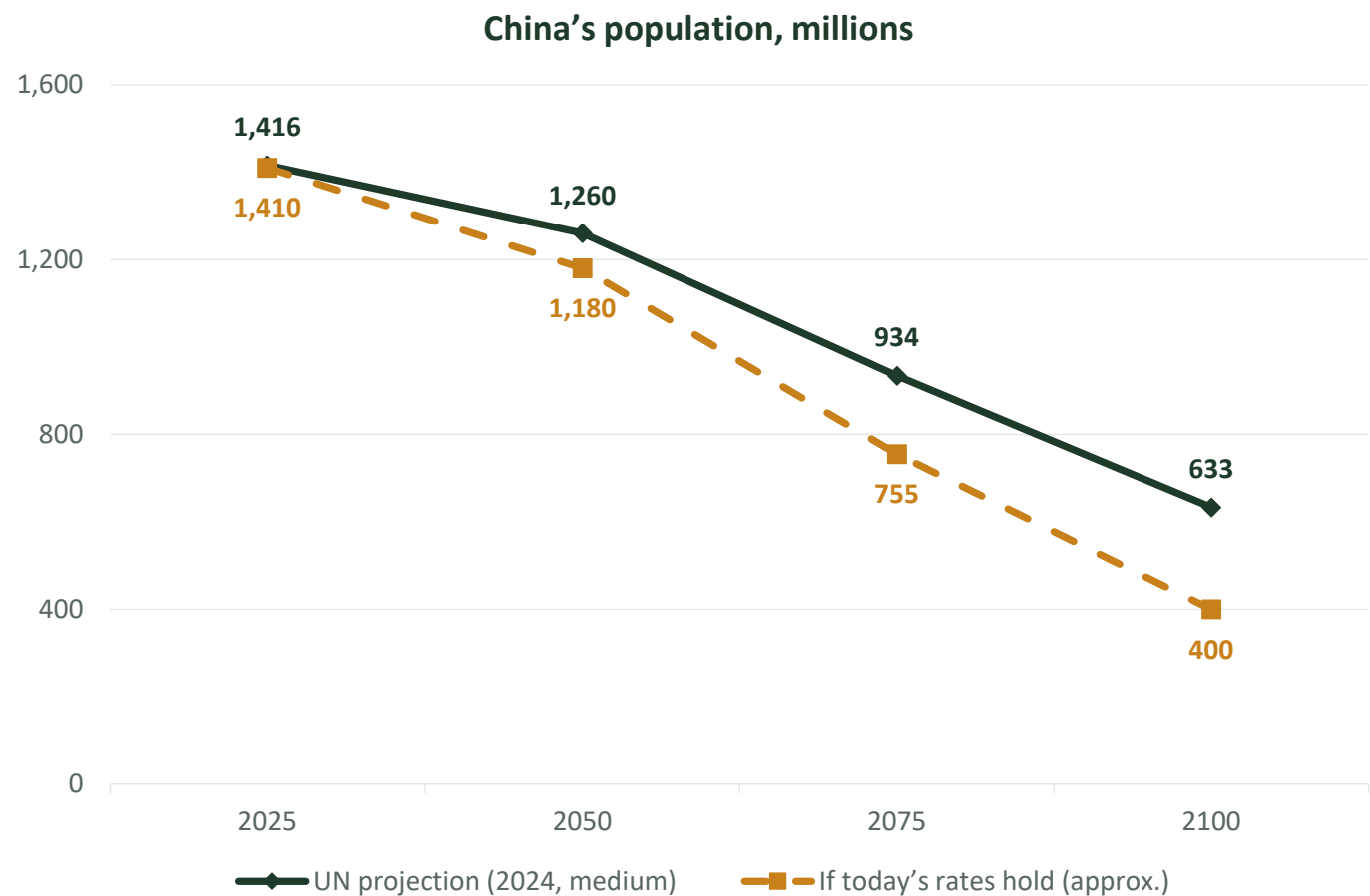
Soybean meal 4.4M metric tons — Mexico, Philippines, Colombia lead

Soybean oil 195,659 metric tons — India, Algeria, Colombia lead

Processed products go to a wider, more scattered set of buyers than whole beans — which means more destinations to reach.

Data source: USDA/GATS, MY 24/25, partial year (October–December).

Our largest customer is getting smaller



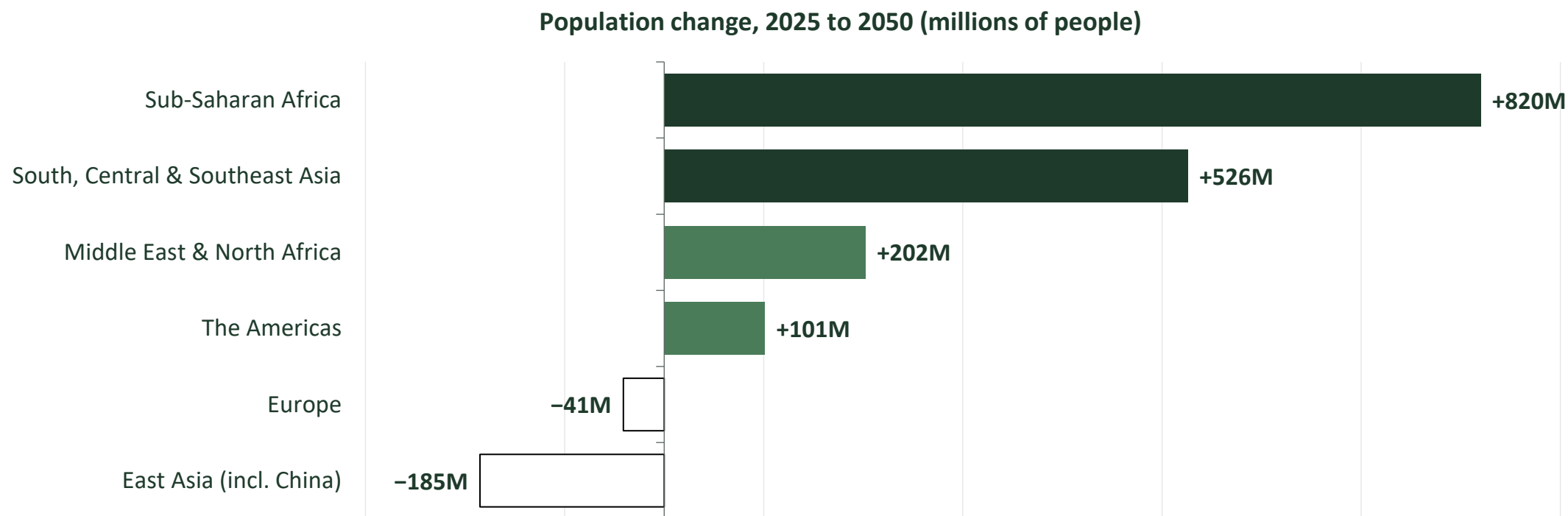
Under the UN's medium scenario, China falls from 1.42 billion today to 1.26 billion by 2050 and 633 million by 2100.

If today's birth and death rates simply hold, the fall is steeper: below the U.S. population around 2128, by one University of Pennsylvania estimate.

A market that takes more than half of our whole-bean exports will not be the same market in 2050.

UN World Population Prospects 2024, medium variant. Dashed line: Jesús Fernández-Villaverde, University of Pennsylvania, as reported in The Wall Street Journal, October 2026; assumes current fertility and mortality and zero net migration; values read from the published chart.

The growth is somewhere else



The world adds about 1.4 billion people by 2050, nearly all of them in Africa and South and Southeast Asia — a long way from our current trade lanes. East Asia, home to our largest customer, loses 185 million.

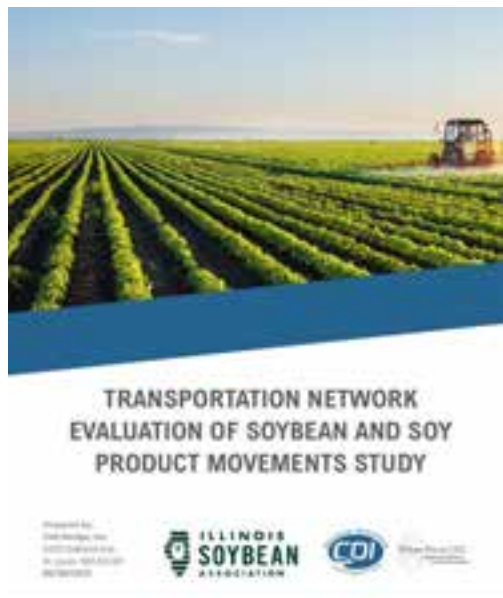
Source: United Nations, World Population Prospects 2024, medium variant (chart and population change, 2025–2050). Regional totals summed from UN sub-regions.

03

What the research found

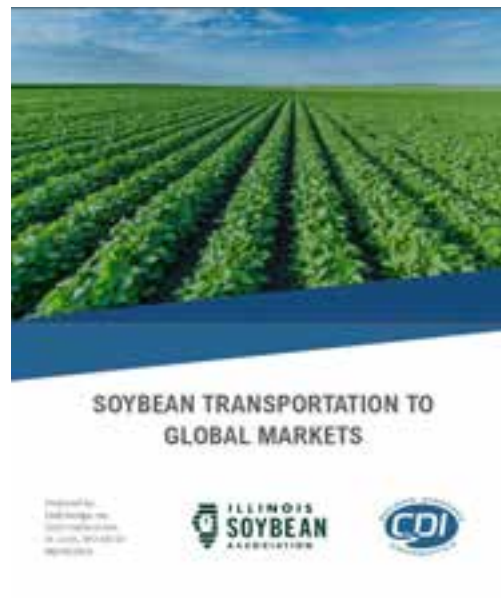
New customers mean new routes. Three studies asked whether the system we have can get us there.

Three studies, three years of work



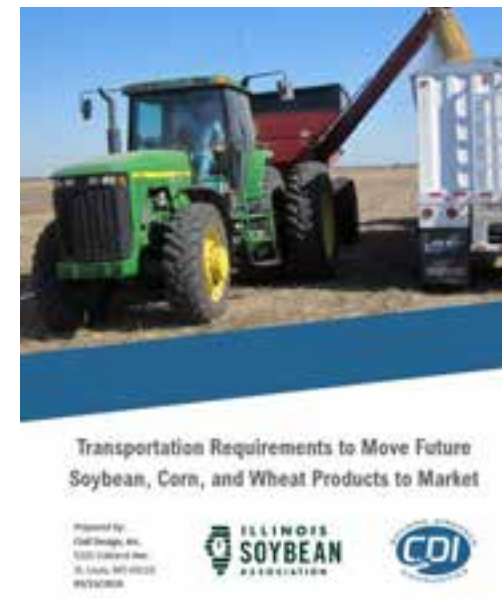
2023

Transportation Network Evaluation of Soybean
and Soy Product Movements



2025

Soybean Transportation to Global Markets



2026

Transportation Requirements to Move Future
Soybean, Corn and Wheat Products to Market

There will be much more to move

Forecast Illinois production, 2025 to 2050

Soybeans

2.2x

629M to 1.40 billion bu

Corn

+24%

2.23 to 2.76 billion bu

Wheat

4.2x

48M to 200 million bu

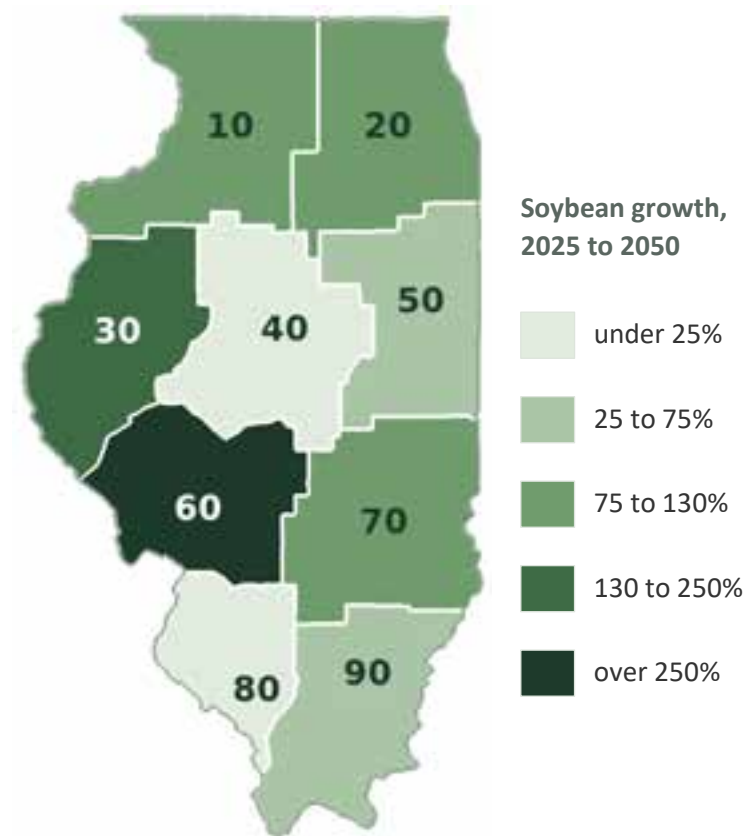
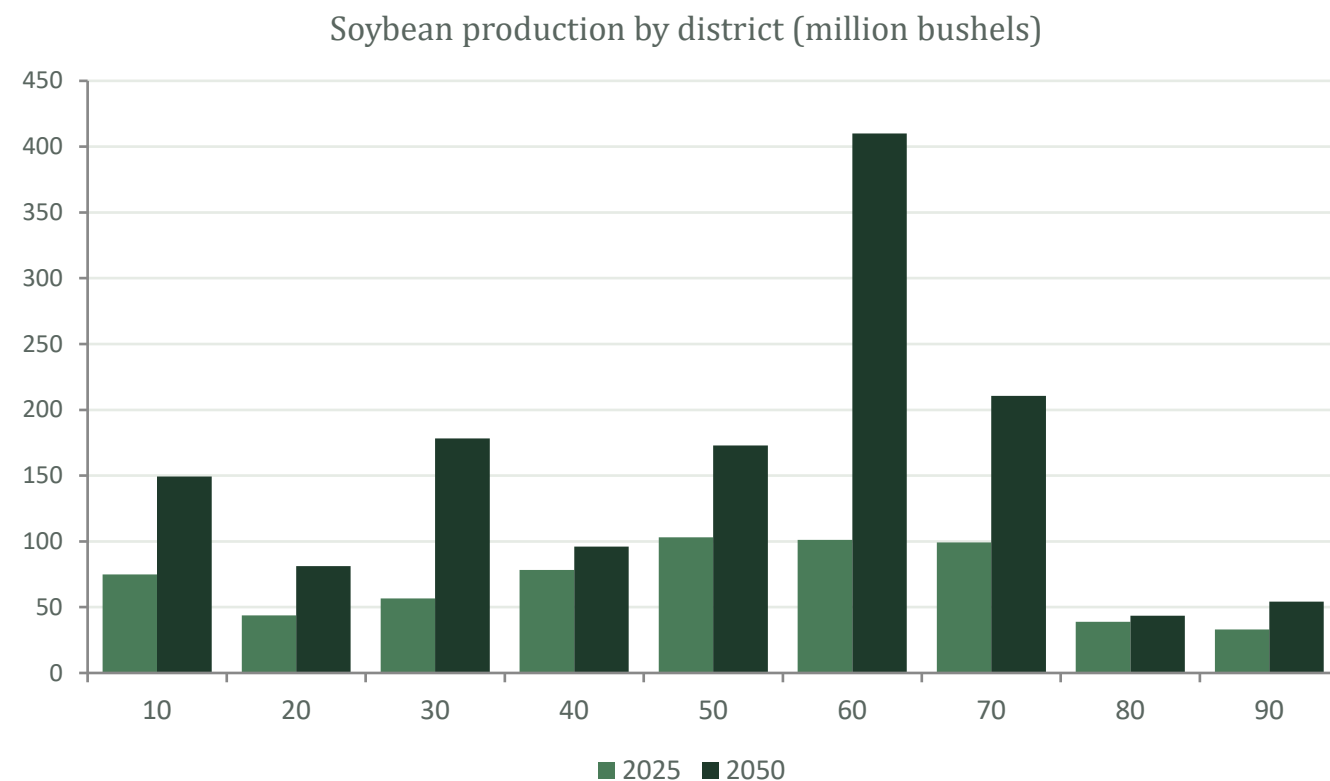
driven by economics and soil fertility

All three crops together: 2.9 billion bushels today, 4.4 billion in 2050.

USDA has since reported 2025 actuals for Illinois: 639 million bushels of soybeans and a record 2.35 billion of corn. The soybean base holds to within 2%; the corn base is about 5% low.

Forecasts prepared for ISA by Polaris Analytics and Consulting; Actuals from USDA NASS, Illinois Crop Production 2025 Summary. 2050 totals: soybeans 1,396,182,455 bu, corn 2,760,868,400 bu, wheat 199,920,716 bu.

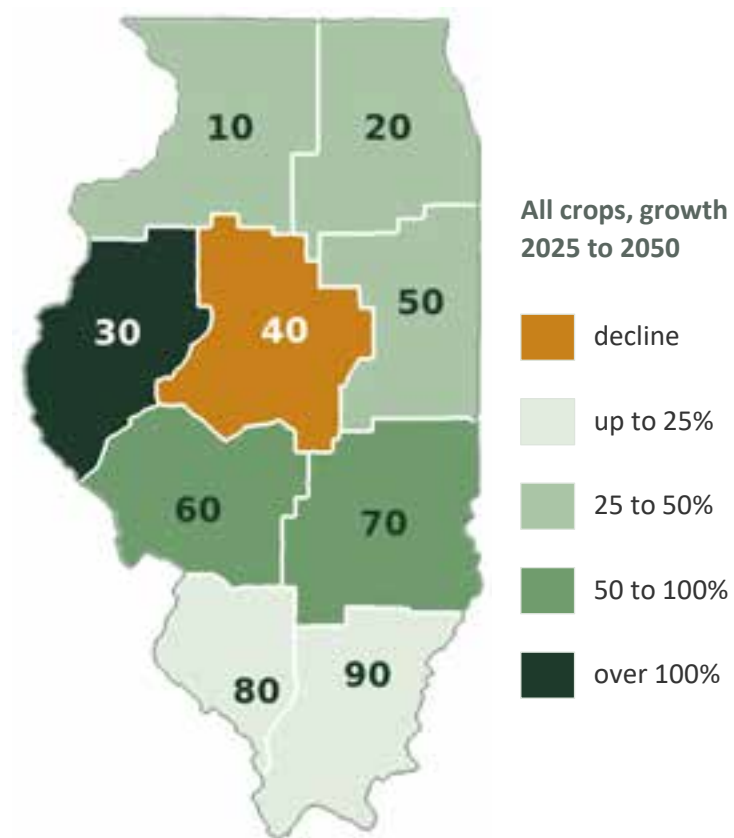
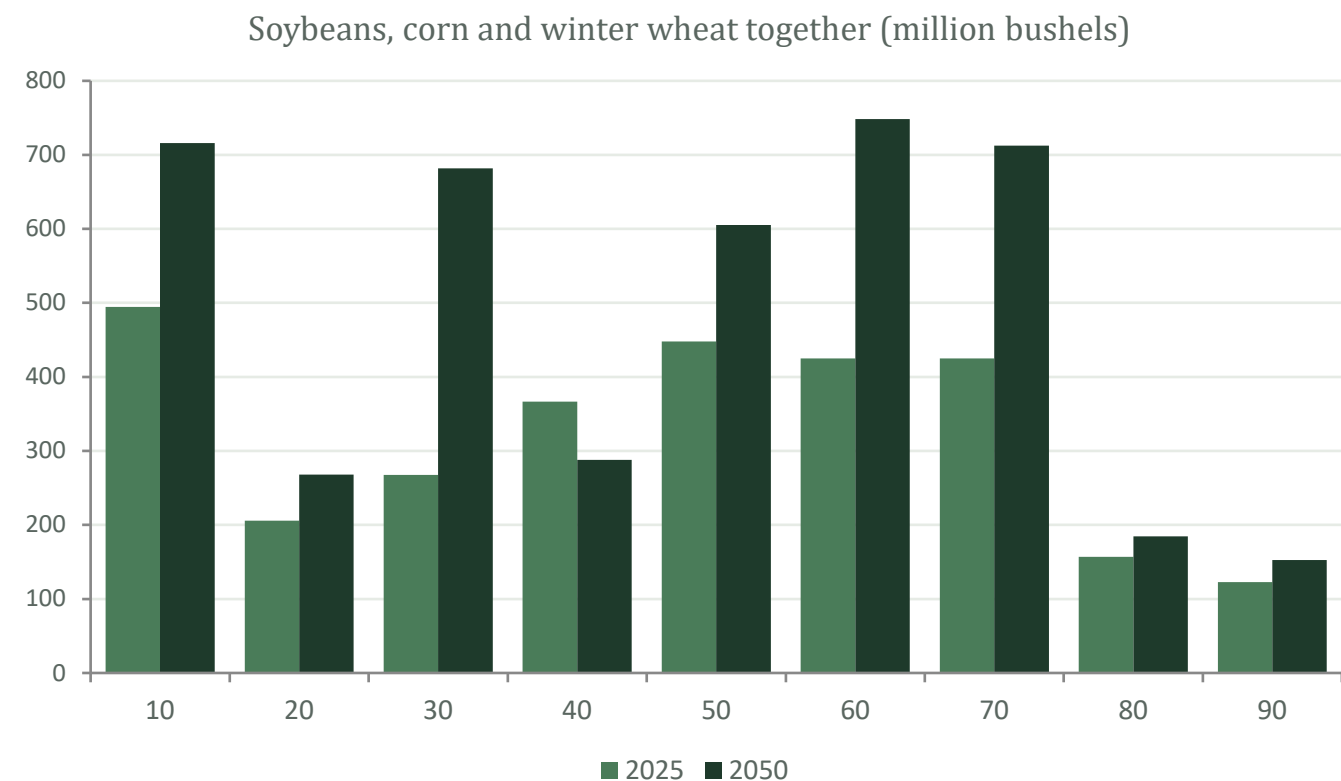
The growth is not spread evenly



CRD 60 quadruples and CRD 30 more than triples. Between them they carry most of the increase.

Forecasts prepared for ISA by Polaris Analytics and Consulting. District geography from Civil Design, Inc., March 2026; shading applied to soybean growth.

Corn and wheat change the picture



+50% statewide, 2.9 to 4.4 billion bushels — and CRD 40, alone, carries 22% less than it does today.

Forecasts prepared for ISA by Polaris Analytics and Consulting. All figures are production volumes in bushels; district geography from Civil Design, Inc., March 2026.

And it grows where the network is thinnest

District	Soybeans	Corn	Wheat	All crops 2050, million bu	Land area within 30 min of the Illinois Primary Freight Network (highway access only)	Elevators with inland water access
	growth 2025 to 2050					
10 Northwest	+100%	+27%	+1,478%	716	54%	9
20 Northeast	+85%	+14%	+157%	268	96%	12
30 West	+215%	+136%	+670%	682	1%	7
40 Central	+23%	-37%	+898%	288	71%	10
50 East	+68%	+21%	+731%	605	76%	0
60 West Southwest	+306%	+4%	+41%	748	49%	7
70 East Southeast	+112%	+37%	+529%	712	65%	0
80 Southwest	+12%	+6%	+94%	185	65%	13
90 Southeast	+64%	+11%	-14%	153	61%	1

Districts 30, 60 and 70 add a billion bushels between them — and on the east side, 50 and 70 have no water option at all.

Civil Design, Inc., 2026. The Illinois Primary Freight Network is 1,512 miles of roadway, so the contour measures road access only; water access is shown instead as the count of grain elevators with inland water or rail-and-water service, from Figure 4.3. No equivalent 30-minute contour exists for the waterways — building one is part of the 2026-27 work.



Right now, the default answer is more trucks

In the districts with the highest projected production, the extra grain moves by road because road is what is there.

At 975 bushels a load, the 2050 harvest means about **1.5 million more truckloads a year** than today.

Is that the most cost-efficient way to move a growing harvest?

And the first mile is already posted

2,530

Illinois bridges rated poor — and 75% of them are owned by counties, townships and municipalities, not the state

711

locally owned structures posted below legal load or closed outright

\$4.97

returned for every dollar spent on bridge maintenance, by ISA's own 2024 study



More volume defaults to the road, and the road is where the system is thinnest.

These are not interstates. The worst of them are first-mile structures — a county road over a creek, posted at twenty tons, that a loaded semi can no longer cross.

Districts 60 and 70 hold **35% of the state's restricted local structures** — and will add **42% of its new bushels** by 2050.

A posted bridge does not stop the grain. It lengthens every trip that used to cross it.

FHWA National Bridge Inventory via LTBP InfoBridge, 2025 submittal. Benefit-cost ratio: ISA rural bridge economic impact study, November 2024. Bushel growth: Polaris Analytics for ISA. Each district's ranked list is in the appendix.

04

Is there a better way?

The routes that exist, the ones that do not, and what the cheapest fix actually is.

Where it goes once it leaves the farm

STAYS IN ILLINOIS

40%

of the Illinois soybean crop

Used at home

Crushed in Illinois for meal, oil and biodiesel. About 255 million bushels a year, and the only destination that never leaves the state.

LEAVES THE COUNTRY — SHARE OF U.S. GRAIN EXPORTS BY GATEWAY

51%

of U.S. grain exports

Down the river

Barge to the lower Mississippi. The Gulf is the largest export gateway in the country, and 98% of the grain loading there arrives by barge.

28%

of U.S. grain exports

Out by rail

Shuttle trains to the Pacific Northwest. Two single-carrier routes also reach Mexico, through Vancouver and Lázaro Cárdenas.

21%

of U.S. grain exports

Everything else

Texas Gulf, rail to Mexico, the Atlantic ports, containers, and the Great Lakes and Seaway — which the studies call the most underused option Illinois has.

Four channels, and nobody can yet say how any single district splits between them.

Where the studies say it is weakest

Road

86% of Illinois soybean production sits within a 30-minute drive of the Illinois Primary Freight Network. Reaching the rest is the hard part, and it is where the growth is landing. Only 1% of CRD 30's land area is that close. This measures highway access only; rail and river access are not counted.

Rail

One shuttle train moves what more than 400 trucks move — but only if it can load and unload inside 24 hours. Very few soybean corridors in the state can turn that much freight that fast, which is what keeps grain on the road.

River

Most locks on the Upper Mississippi and Illinois rivers were built in the 1930s, well past a 50-year design life. Expanding 600-foot locks to 1,200 feet would let a modern tow through in one pass instead of two.

Each mode is limited by something different, which is why there is no single fix.

There is room to move it more efficiently

93%

of Illinois grain elevators can't load a shuttle train —
only 51 of 746 can

Up to 8¢

per bushel — what shuttle service can save on rail
shipping

Capacity is not only a question of building more. Some of it is already sitting on the table.

So, is more trucking the answer?

Only where there is no alternative.

- A shuttle train moves what more than 400 trucks move, and shuttle service saves up to eight cents a bushel. Only 51 of the state's 746 elevators can load one.
- The districts adding the most bushels have few alternatives: seven water-served elevators in CRD 30, seven in CRD 60, and none at all in CRD 70 or neighboring CRD 50.
- The cheapest capacity is the capacity already built — spare elevators in the center of the state, dual-mode facilities in the southwest, and a Great Lakes route barges can already reach.

Trucks will carry the growth by default. Every other option has to be chosen.

And what we are watching right now

Railroad consolidation

Union Pacific's proposed acquisition of Norfolk Southern is before the Surface Transportation Board. Federal rules require a merger to enhance competition, not merely preserve it — and several state attorneys general have urged rejection. Fewer Class I railroads changes which markets Illinois grain can reach, and on what terms.

Low water on the rivers

Low water hit the Mississippi, the Illinois and the lower Ohio during the 2024 and 2025 harvests, forcing lighter loads and smaller tows. August 2026 started low again before rain restored normal levels by late September. Four of the last five export seasons began from a weak position.

Draft limits at the Panama Canal

Reduced water at Lake Gatun has cut the maximum draft at the newer Neopanamax locks. Dry-bulk vessels carrying soybeans use the original 1914 locks, which are unaffected so far — but the 2023–24 drought showed how quickly that can change.

None of these are Illinois problems. All of them are Illinois exposure.

05

The opportunity

2030 · 2040 · 2050

The milestones for 2030, 2040 and 2050 aren't set yet. They will come out of this engagement, district by district, through 2027.

Some of it is already funded

Waterways

USACE

- \$2.5 billion for inland waterways in the 2021 infrastructure law, of which \$829.1 million went to the Navigation and Ecosystem Sustainability Program
- \$732 million of that to a new 1,200-foot chamber at Lock 25 (Winfield, Mo.), and \$97.1 million to fish passage at Lock 22 (near Hannibal)
- A further \$120 million appropriated to the program in FY2024

Roads and bridges

federal and state

- \$1.4 billion in bridge-specific federal funding for Illinois, plus \$182.2 million for infrastructure resilience
- \$235 million for Illinois ports and waterways, including an \$8 million port development grant
- On the state side, Rebuild Illinois put close to \$5 billion into bridges and \$150 million into port capital, \$40 million of it to Alexander-Cairo

Ports and marine highways

MARAD

- \$82.1 million to Illinois ports in 2024 through the Port Infrastructure Development Program; the FY2026 round put \$489 million on the table nationally
- Container-on-barge equipment funded at Granite City and Madison on the M-55 and M-35 corridors: \$1.3 million in 2020 and \$2.4 million in 2022
- The infrastructure law added \$25 million to America's Marine Highway Program, its largest single boost; 58 marine highway projects are designated nationally

The money exists. Federal formulas still weight population density over agricultural productivity.

USACE and congressional announcements 2022-2024; MARAD Port Infrastructure Development Program and America's Marine Highway Program awards; Illinois IJA allocations as reported in Civil Design, Inc. for ISA, 2023; IDOT Illinois Port Facilities Capital Investment Grant Program.

What comes next

1

A fact sheet for every district

Nine of them, one per crop reporting district. The first examples are presented at the Soybean Summit in January 2027.

2

Your district's own numbers, and our questions

What grows, how it leaves, what is already funded, and where the first mile is failing — plus the things only you can tell us.

3

A case for the next capital bill

Agricultural transportation input is assembled through 2027, for a bill expected in spring 2028.

Here is what one of them looks like.

CRD 60 is the example, across four pages: the largest crop volume in Illinois by 2050, no soybean processing in the district, and more closed local bridges than anywhere else in the state.

The full set of nine districts, four pages each, is in the companion appendix.

CRD 60 — West Southwest



+306%

soybean growth to 2050

49%

land within 30 min of the
highway freight network

16

ag projects, FY27 to 31

What grows here

million bushels	2025	2050
Soybeans	101.1	410.1
Corn	319.3	331.7
Wheat	4.7	6.6

All crops, 2050 **748M bu**

+76% on 2025, all crops

About 436,000 truckloads a year today and 768,000 by 2050, at 975 bushels per load. Truck trips grow 11% to 31% in each forecast period.

How it leaves today

Grain elevators	104
Rail-served	22
Water-served	7
Shuttle facilities	7
Soybean crush (value-added)	0
Ethanol plants	1

The largest crop volume in the state by 2050 and not one soybean processing facility in the district. Half the production area sits outside the contour, adjoining the same gap in CRD 30. One ethanol plant at Madison takes about 32 million bushels of corn.

What would help

Efficiency

Soybean volume quadruples with no crush in the district. Every bushel makes a long first trip that a plant here would shorten.

Resiliency

Seven water-served elevators, with the Mississippi on one side and the lower Illinois River on the other. The water option is barely built out.

Advantage

The greater St. Louis terminal complex is on the doorstep: rail, barge and the Port of Kaskaskia. Nowhere else would a transload change the economics more.



CRD 60 — West Southwest

What is already committed

\$104.4M

ILL 111, Pontoon Beach to I-55/70, Madison

\$23.5M

ILL 97/125 at Old Covered Bridge Ln, Sangamon

\$11.0M

Chain of Rocks Canal, Granite City, Madison

PRIVATE AND FEDERAL

No soybean processing in the district and none announced, while soybean volume quadruples by 2050. Federal: NESP work at Locks 22 and 25, LaGrange (about \$358 million) on the northern boundary, and MARAD container-on-barge equipment at Granite City and Madison Harbor.

Your district in the network

WHAT THIS DISTRICT DEPENDS ON

The greater St. Louis terminal complex, and CRD 30's roads, since the two districts share one gap in the network.

WHAT DEPENDS ON THIS DISTRICT

LaGrange and Lock 25 sit in this district. Grain moving downriver from anywhere above Grafton passes through here.

LIKELY BOTTLENECK — A HYPOTHESIS

The long first trip. No crush, seven water-served elevators, and half the production area outside the contour, next to the same gap in CRD 30.

What happens next

WE BRING YOU

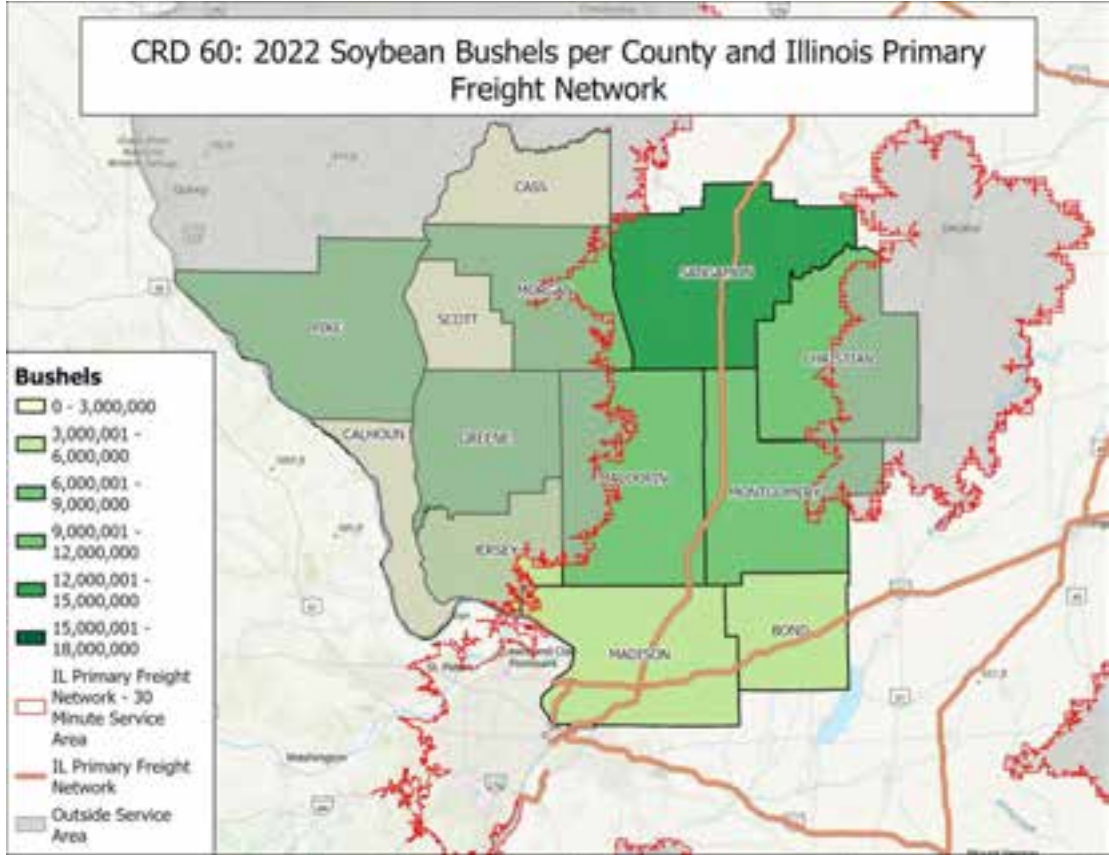
- Average haul distance, farm to first destination
- Storage capacity measured against 2050 production
- Where the bushels actually go, by mode and market
- 128 locally owned bridges here are posted or closed, 99 of them shut. Full list on the bridge page

YOU TELL US

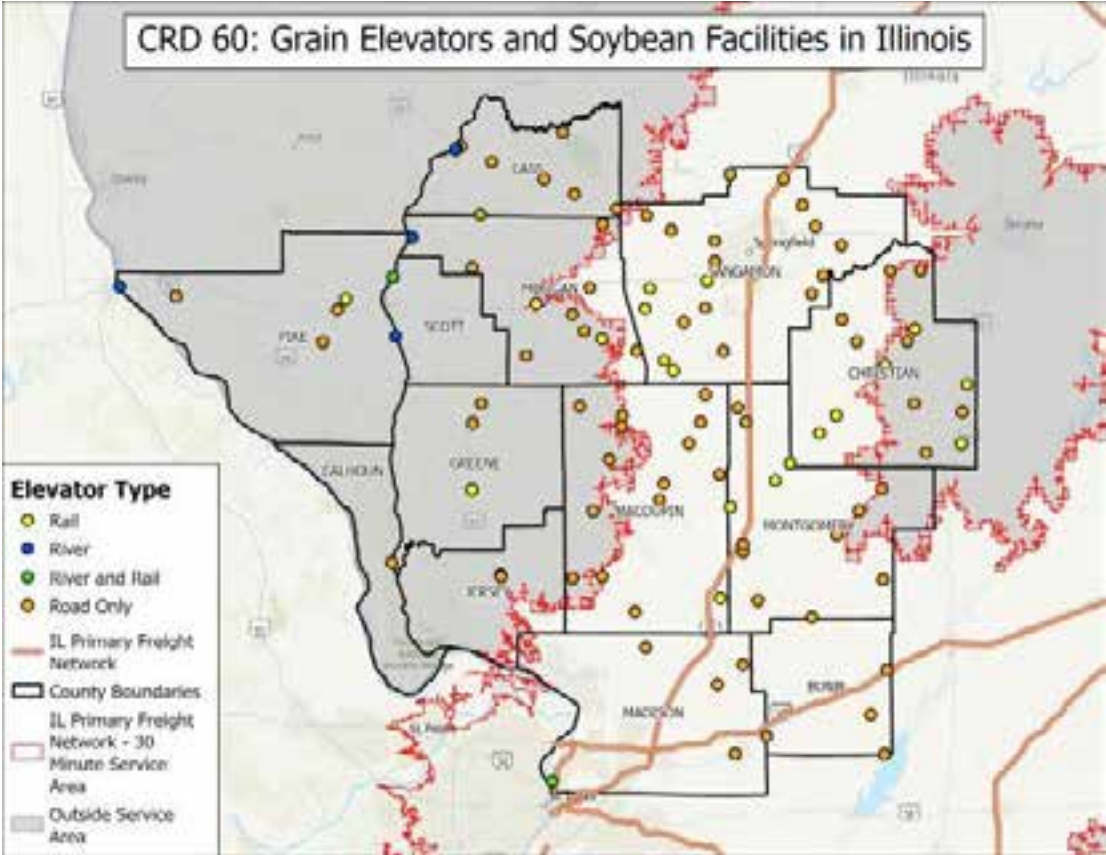
If a crush plant or a river transload were built here, where would it have to be to actually change your haul?

Answers go to your ISA district director and the study team. Input is assembled through 2027.

CRD 60 — West Southwest

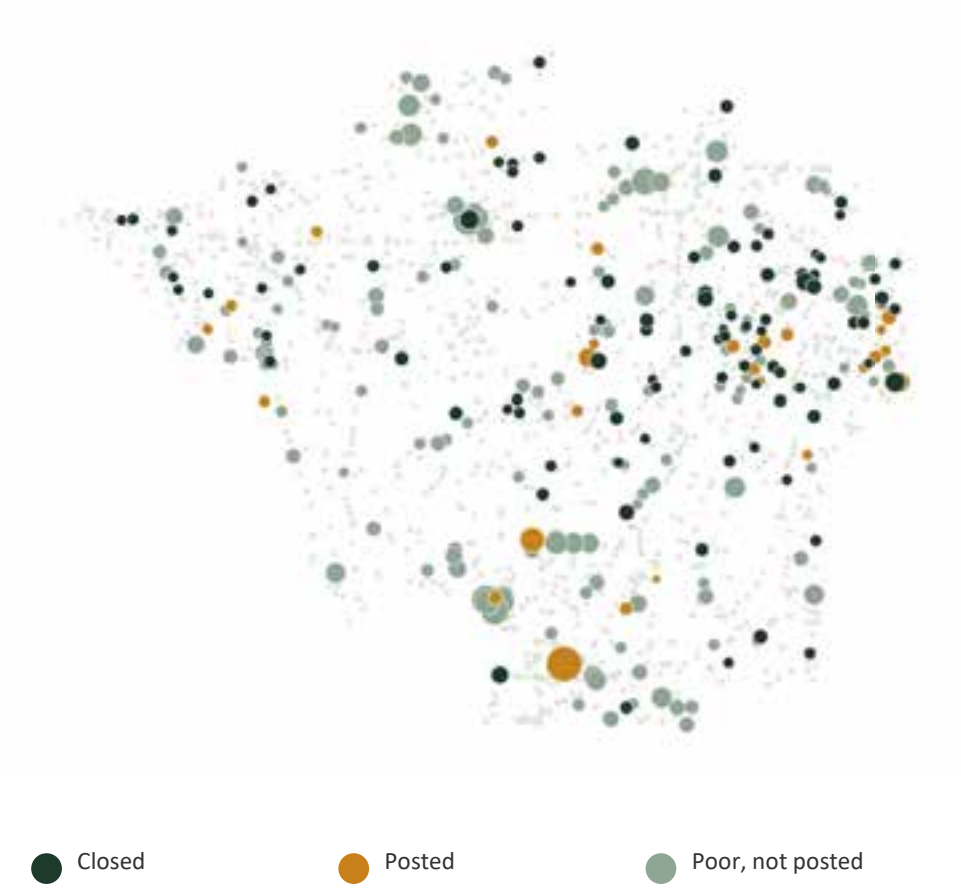


Bushels per county and the freight network



Grain elevators and soybean facilities

CRD 60 — West Southwest



Marker size is average daily traffic.

FHWA National Bridge Inventory via LTBP InfoBridge, 2025 submittal. Locally owned structures only, posted, closed or in poor condition, ranked by average daily traffic.



99

closed

29

posted below
legal load

145

poor condition,
not posted

Highest-traffic structures needing work

ADT	Carried over	County	Status
12,600	CNTR GROVE/ FAU 88 over MCT BIKE TRAIL	Madison	Posted
7,600	S MAIN ST over TOWN BROOK	Morgan	Poor
5,750	ALBY ST/ FAU 8988 over US ROUTE 67	Madison	Poor
5,100	N SEMINARY /FAU 89 over BLACK CREEK	Madison	Poor
4,100	FAS 629 over SPRING CREEK	Sangamon	Poor
4,000	BROWN ST./ FAU 896 over ROCKSPRING CREEK	Madison	Poor
2,750	ELM ST./ FAU 8989 over US ROUTE 67	Madison	Poor

What we need from you

Tell us how your grain actually moves.

- Which roads and bridges carry your grain to the elevator, the river or the rail line — and which of them are posted?
- Where would a crush plant, a river transload or a shuttle loader actually shorten your haul?
- What runs short first at harvest: trucks, storage, rail cars or barge space?

Answers go to your ISA district director and the study team, and shape the case for the 2028 capital bill.

TRANSPORTATION 2050

Thank you

Scan the code for our transportation research studies.

[Name | Title | Email]

