

# Factors influencing native seed price and availability in agricultural landscape of the central US

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# Restoring habitat in ag landscapes

Emerging role of large ag conservation programs

## Conservation Reserve Program (CRP)

- USDA infrastructure at scale (~2.6 million acres\*)
- Revegetation as main tool

## Emerging role to address complex conservation issues

- More ecosystem rehabilitation
  - Rare habitat restoration, pollinator recovery

## Prerequisites for success

- Dependable native seed supply
- Consistently affordable seed





# Native seed price and availability

Understanding a pillar of the CRP program

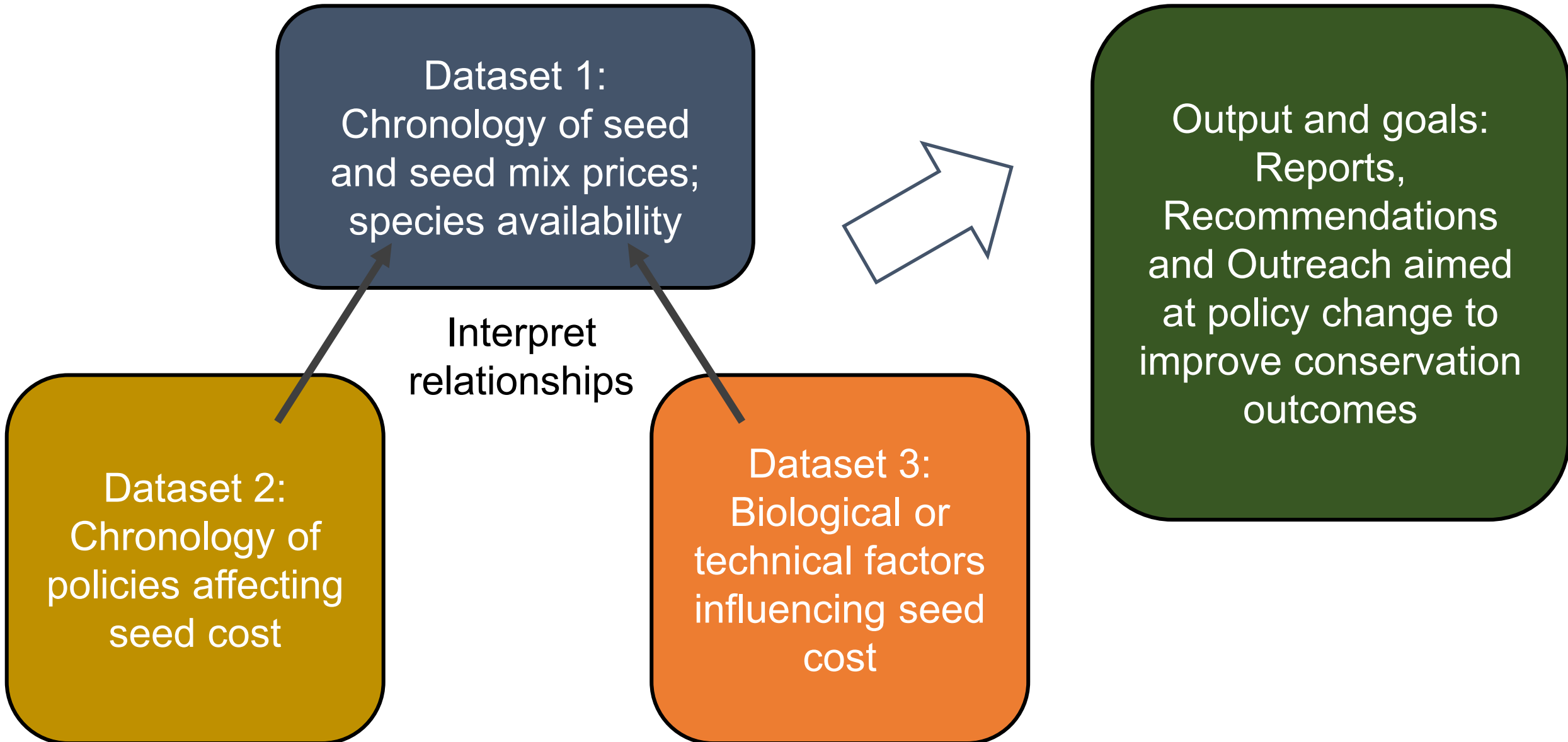
**Why do native seeds cost what they cost?**

**Are native seed prices a good “value”?**

**What roles do policy or social structures have?**



# Approach and Goals





# Research Objectives

## **Historic price and availability**

- 1) Assess changes in price, availability and composition for native species and native seed mixes over time

## **Context of policy and other factors**

- 2) Investigate policy drivers influencing the native seed market

## **Biological and technical factors**

- 3) Determine species traits that contribute to seed price

# Historic seed price and availability

## Regions

Upper Midwest  
(MN, WI, IA, IL,  
MO)

Great Plains  
(ND, SD, NE, KS,  
OK, TX, CO)

Retail Price List No. 202  
February 1993  
Discounts to Soil & Water Conservation Districts  
Volume Discounts Available  
Freight Prepaid On Orders Over 200 Lbs.  
Toll-Free Number - 1-800-262-9892

VARIETY	PRICE PER PLS Lb.	VARIETY	PRICE PER PLS Lbs.
<b>BLUESTEM</b>		<b>KLEINGRASS</b>	
Big, Champ	\$7.25	Selection 75	\$2.75
Big, Champ Certified	\$7.75	Verde Certified	\$3.00
Big, Kaw	\$4.50	<b>LOVEGRASS</b>	
Big, Kaw Certified	\$5.00	Sand, Bend	\$3.00
Big, Pawnee	\$4.75	Sand, Bend Certified	\$3.50
Big, Roundtree	\$4.75	Sandhill, Mason	\$3.50
Little, Aldous	\$5.50	Sandhill, Mason Certified	\$4.00
Little, Aldous Certified	\$6.00	Weeping, Ermello	\$3.25
Little, Blaze	\$6.00	Wilman	\$6.50
Little, Blaze Certified	\$6.50	<b>SWITCHGRASS</b>	
Little, Cimmaron	\$5.00	Alamo	\$4.00
Little, Pastura	\$5.50	Blackwell	\$1.95
Little, Native	\$5.00	Cave In Rock	\$1.95
Sand, Woodward	\$4.50	Pathfinder	\$1.95
Yellow, Plains or Spar	\$5.50	Trailblazer	\$1.95
Yellow, King Ranch	\$11.00	Trailblazer Certified	\$2.45
Yellow, Old World T587	\$11.00	<b>WHEATGRASS</b>	
<b>BUFFALOGRASS</b>		Western, Arriba	\$5.50
Plains Treated KNO3	\$8.50	Western, Barton	\$5.50
Texoka Treated KNO3	\$8.00		

## Methods

Compiled price of species in quantities > 1/2 oz, including cultivar/variety identity

Resolved taxonomy across sources

## Sources

Catalogs, seed quotes, public bids (IA), online retail data (Internet Archive), direct from vendors

## Summary Statistics

84 Vendors

872 Species

44,235 price records

26 years (1998-2024)

# Historic seed price and availability

Availability has increased

Ladd 2005: list of **tallgrass prairie** species

## forest/marsh

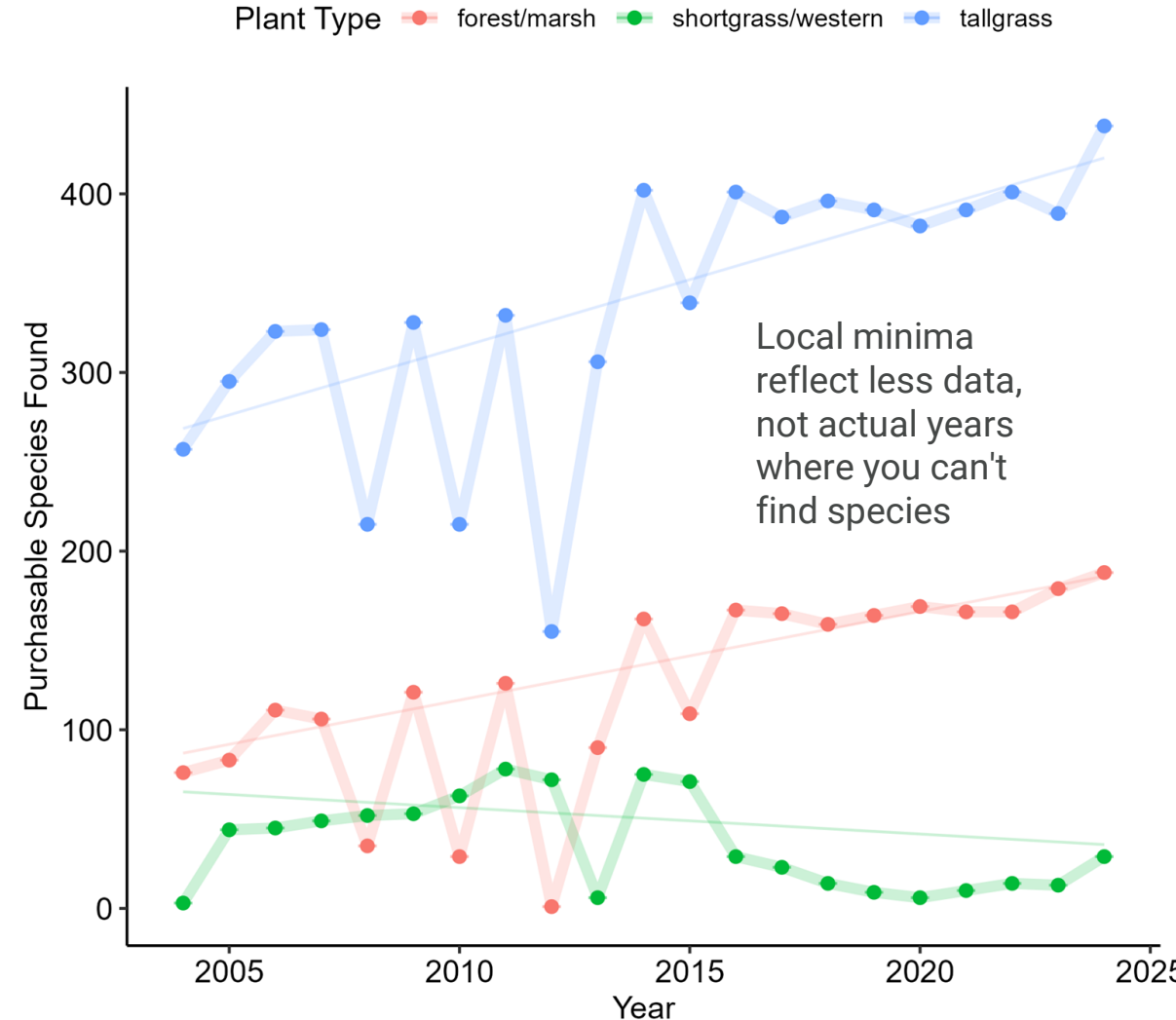
any Upper Midwest species not on the Ladd list

## shortgrass/western

any Great Plains species not on the Ladd list

Overlap/generalists end up in the **tallgrass** group

**Preliminary approach!**





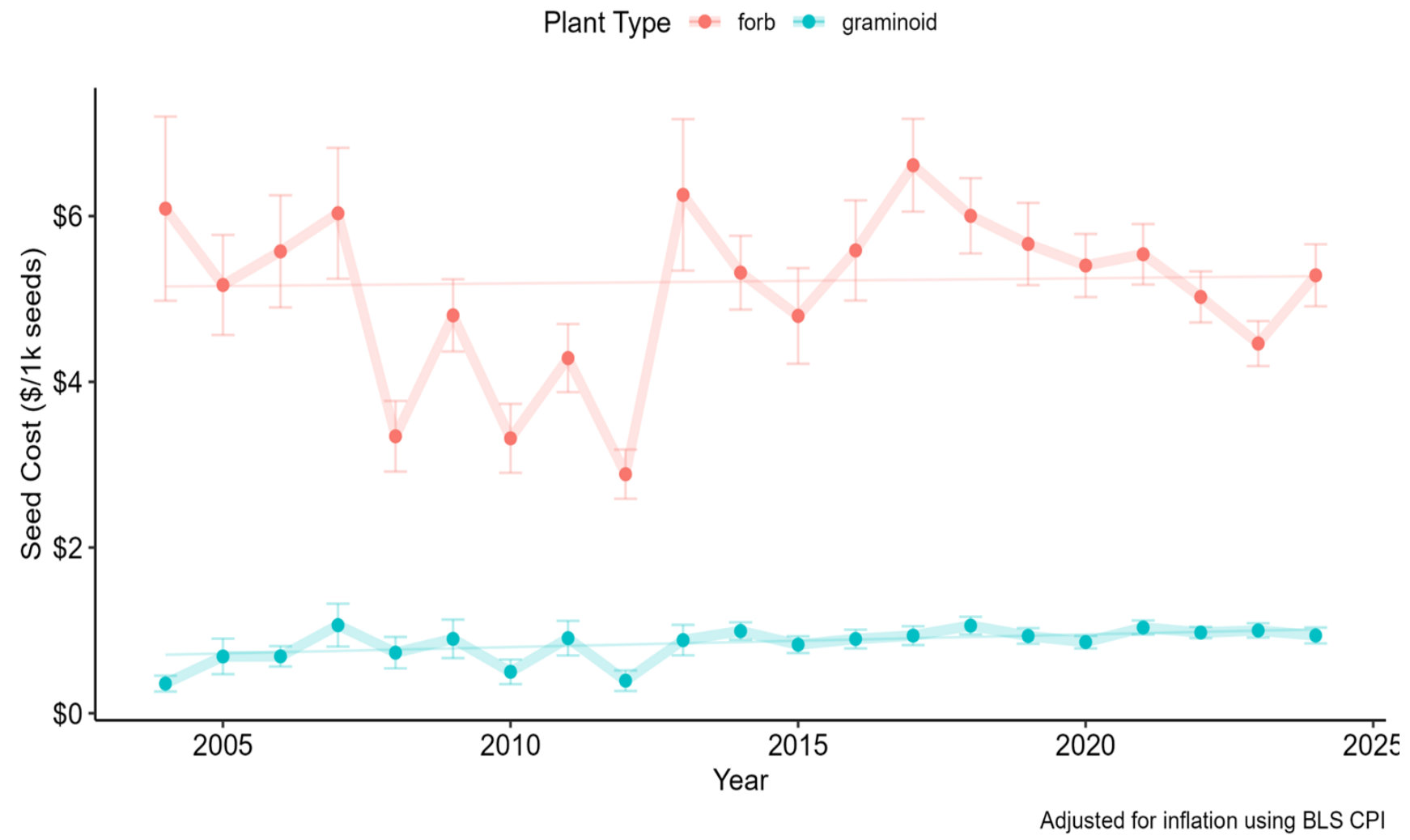
# Historic seed price and availability

Prices vary by year, but reasonably stable

Small increases in price over last 20 years\*

Grasses increased more than forbs (~20 cents vs ~10 cents /1k seeds)

\*New species vs. workhorse species?





# Historic seed mix price and composition

## Regions

Upper Midwest  
(MN, WI, IA, IL,  
MO)

Great Plains  
(ND, SD, NE, KS,  
OK, TX, CO)

## Methods

Include only CRP mixes with species composition. Data collection focused on CP2, CP25, CP42. Data were mostly opportunistically collected.

## Sources

Catalogs, online retail data (Internet Archive), direct from vendors

## Summary Statistics

18 Vendors

209 Species

851 seed mix records

20 years (2003-2024)

# Historic seed mix price and composition

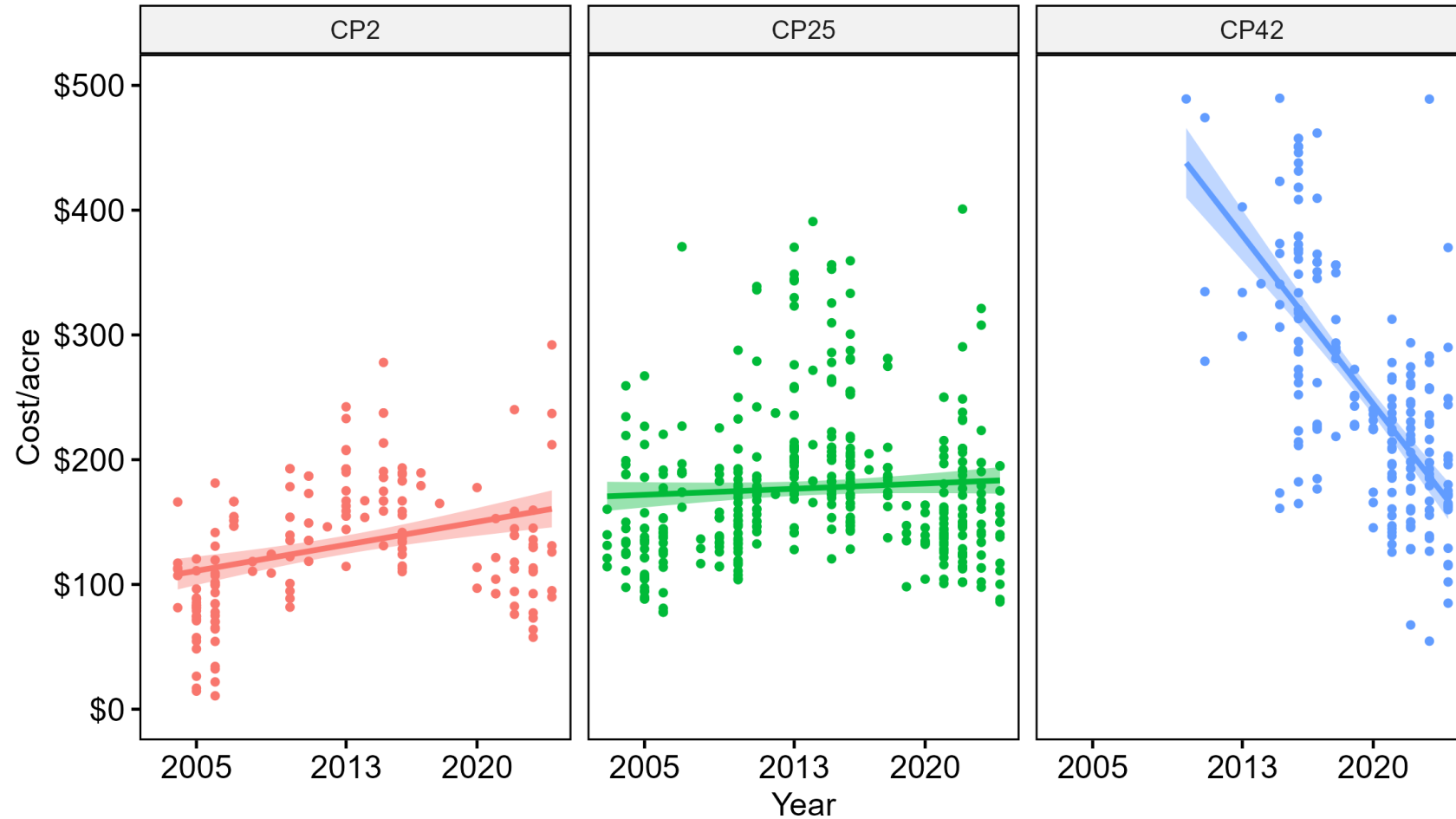
Seed mixes mostly more diverse





# Historic seed mix price and composition

Seed mixes vary in price trends



# Context of policy and other factors

## Methods

Historical treatment of the native seed market in the Upper Midwest

## Sources

Grower statements/stories, newspaper articles, policy papers

## Grass seed prices skyrocket

Supplies down due to drought, sprouting demand

**By Al Swegle**  
*Grass seed prices*

Farmers are finding that there's a shortage of grass seed this spring. And what's available is expensive. Even urban homeowners aren't escaping the price hike, as some bluegrass mixtures for lawns are up 50 percent over last year.

The hike in prices and seed shortage are being blamed on shrunken supplies caused by last year's drought in the southeastern U.S. and the demand for seed to meet requirements of a new federal farm program.

"I've never seen such a run on grass seed," John Creswell, Eastern Iowa crops specialist, told *The Gazette*.

Jerry Naylor, who provides grass seeds for farmers in the eastern half of Iowa, has run out of bromegrass at his Naylor Seed store near Scotch Grove.

So has Hawkeye Seed, 803 Third Ave. SE. Last fall bromegrass was selling for 80 cents a pound, and now it is \$4.50 a pound when it can be found.

The price of other seeds has doubled since Jan. 1, Naylor said Thursday.

"You can buy most grasses like timothy and orchard grass for \$1.32 a pound today, twice what it was last fall," he said.

Harley Swehla of Hawkeye Seed Co. said 50-pound bins of bluegrass seed that last year sold for \$71.40 now sell for \$115 a bag.

The shortage could become even more acute since Naylor estimates only 60 percent of his customers have made their grass seed purchases this year.

"My advice to farmers is to get their order in while grass seed is still available," Naylor said.

Farmers are demanding grass seed in a big way this year because many will be seeding down ground for the new 10-year conservation reserve program.

Iowa has the second largest sign-up in the reserve program in the nation. Nationally 10.5 million acres will be planted to cover grasses under the program.

"We still have orchard grass, tall fescue and timothy available, but we may run out of the other grasses," said Naylor.

Before buying seed, Creswell advises farmers in the farm program to go to their local Agricultural Stabilization and Conservation Service office to find out which grass mixtures are best recommended for their particular county.

Grass mixture recommendations vary from county to county, he said.

Since bromegrass is either in poor quality or sold out, Creswell said farmers should contact

themselves to seeding this year on a temporary basis with mixtures that may not produce the desired sod base to the pastures.

Farmers need to be wary of shady operators offering low quality seed in view of the Midwest grass seed shortage, Naylor's partner, Dave Naylor, said.

"Read the seed analysis tag before you buy," Dave said.

Be careful of the purity and germination of the seed being offered, he said. Low purity is bad, because you won't be getting what you paid for. Low germination isn't quite so bad, because you just have to plant more of the product to get the same yield result, he added.

Some of the latest batch of seed being offered to Iowa farmers is being imported from Canada, which is reaping an unexpected bonanza from Iowa's grass seed shortage.

"The Canadians are grinning from ear to ear about our shortage problems," Naylor said.

Dave Naylor recommends not buying Canadian bromegrass seed if it contains crested wheat grass, quack grass, or wild oats. Dave also said farmers should be cautious of buying seed from Canada, because Minnesota law allows seed to be sold that has a trace of quack grass.

## NEWS NOTES /

### FARM

**Hearing time**  
■ WILLIAMSBURG — An agricultural policy hearing chaired by U.S. Rep. Dave Nagle, D-Waterloo, will start at 9 a.m. today in the City Hall at Williamsburg. The time of the hearing has been rescheduled several times.

**High yields contest**  
■ Irvin Scott of Marion and R.C. Hagerman of Cedar Rapids produced the high yields in the corn and soybean contests, respectively, sponsored last year by the Linn County Better Crops Club.

Scott produced a yield of 205.24 bushels per acre planting Crows 488 corn, while Hagerman produced a yield of 57.30 bushels planting McCubbin Taylor soybeans.

Runners up were Leonard Broulik and Son of Mount Vernon with a 57.23 bushel yield in the soybean contest and Donald Keiper of Palo with a 184.15 bushel yield in the corn contest.

**Lions contest**  
■ Zabokrtsky Farms of Walker and Ted Becker of Center Point were the top yield winners in the corn and soybean contests, respectively, sponsored by the Alburnett Lions Club.

Zabokrtsky yielded 208.54 bushels, the third best yield in the district, with a Pioneer 3377 variety. Zabokrtsky placed second in the soybean contest with a 57.58 bushel yield. Becker yielded 57.58 bushels in the soybean contest with a McCubbin Reno variety. The second place winner in the corn contest was Kevin Squires of Center Point.



**Farmers protest**  
A tractor displaying U.S. and Colorado flags leads a tractorcade up interstate 70 Thursday morning as farmers made their way to Denver, Colo., where they planned to stage a protest at the Farm Credit Corp. of America.

# Context of policy and other factors

## Results

- Native seed market was initially driven by restoration activity (roadsides, conservation) and utilized by CRP after establishing
- Increasing standards for CRP practices kept market expanding

*“While the seed native seed industry still needed to expand in terms of quantity to meet the growing demand generated by state and federal conservation policy (especially to meet buyers’ demands for low cost seed), the growers already had a diverse array of grasses and forbs available to sell.”*

**Andy Olson**



# Biological and technical factors

## **Biological/ ecological traits**

Seed size, seeds per plant, phenology, plant height

## **Data Sources**

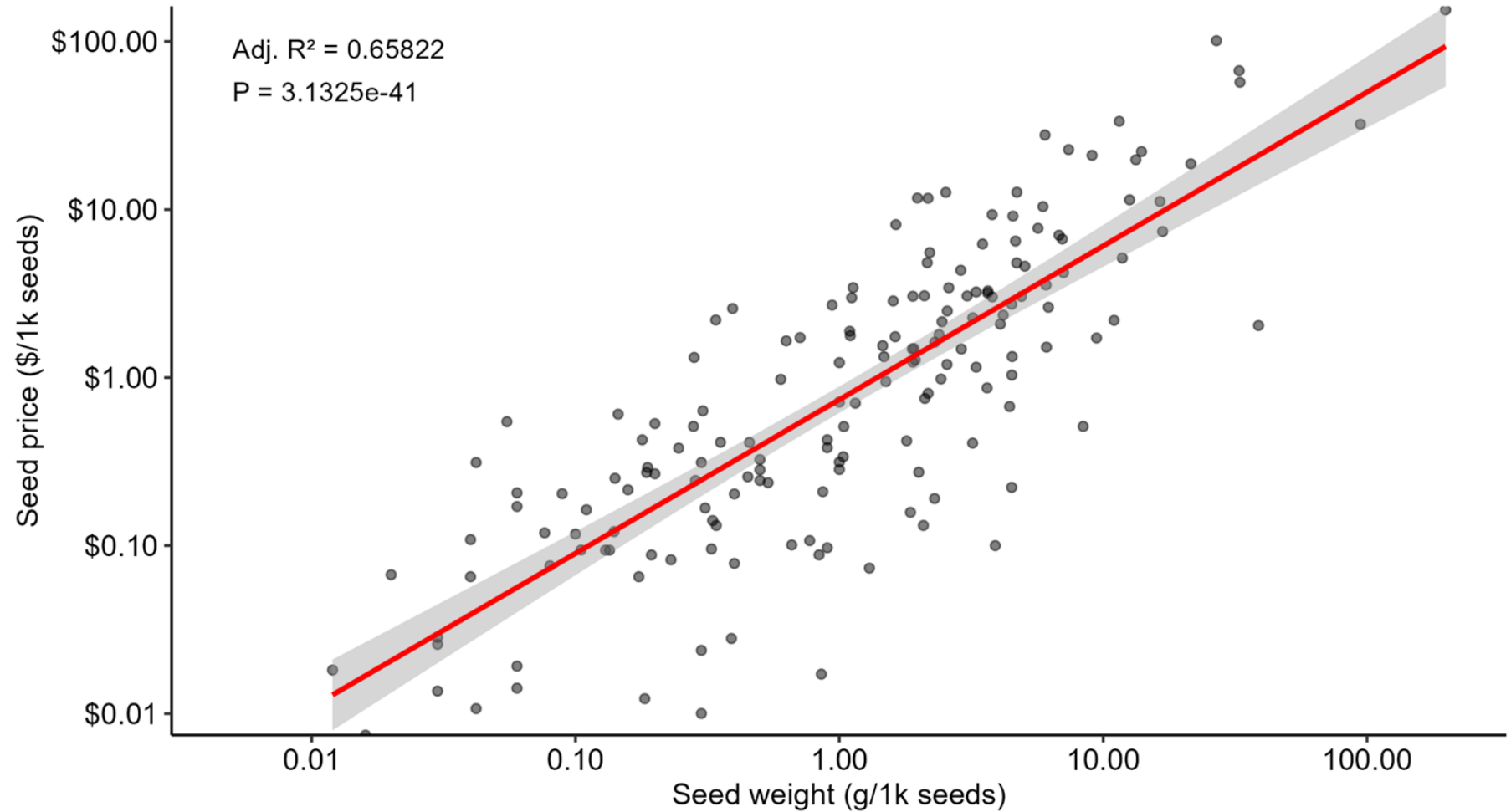
USDA PLANTS, FNA, FGP, Literature

## **Methods**

Derive mean trait measures among sources to cover whole “commercial flora”, regression analysis

# Biological and technical factors

Large seeded species are more expensive

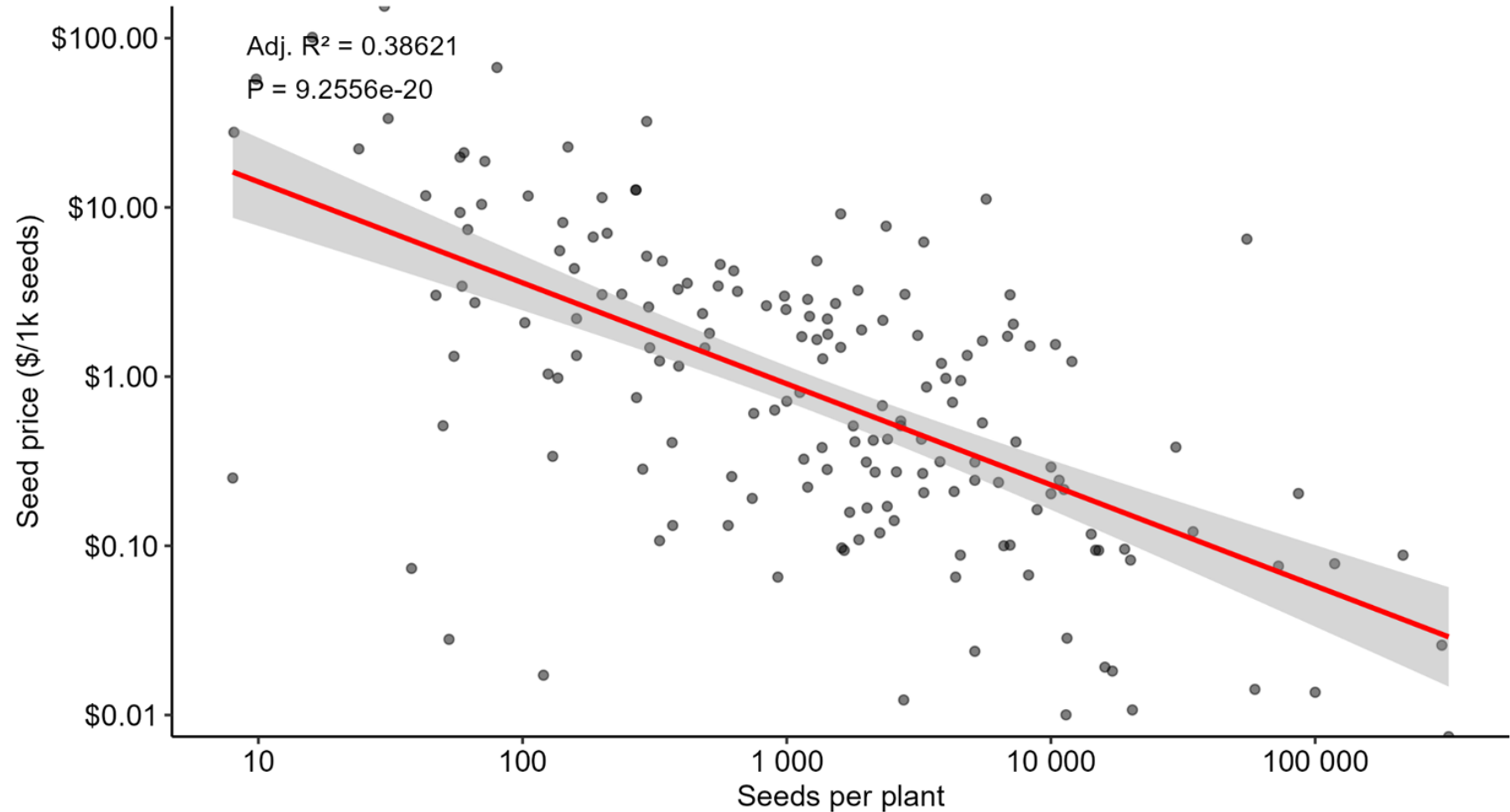


Adjusted for inflation using BLS CPI, axes log transformed



# Biological and technical factors

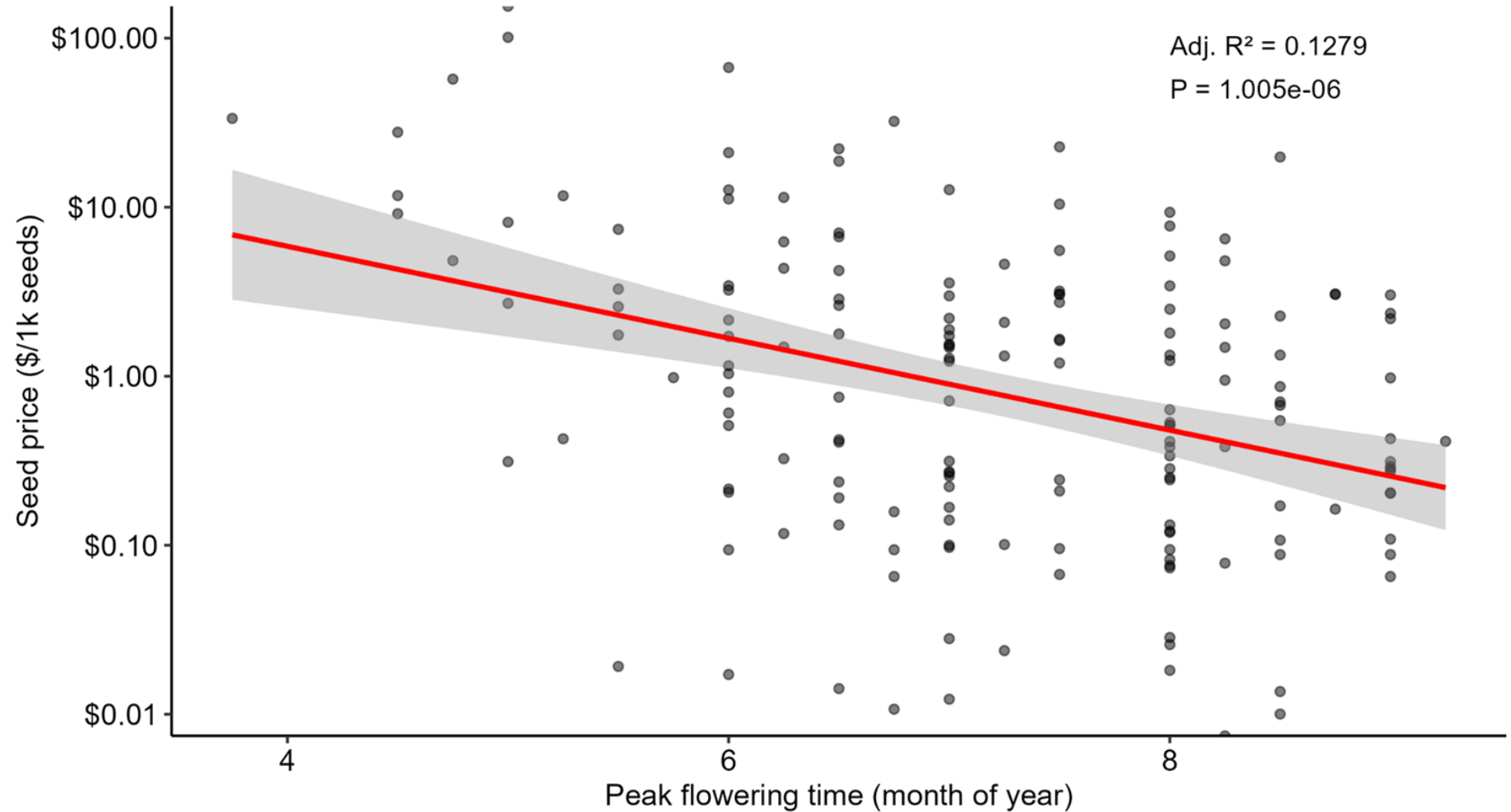
Low-yielding species are more expensive



Adjusted for inflation using BLS CPI, axes log transformed

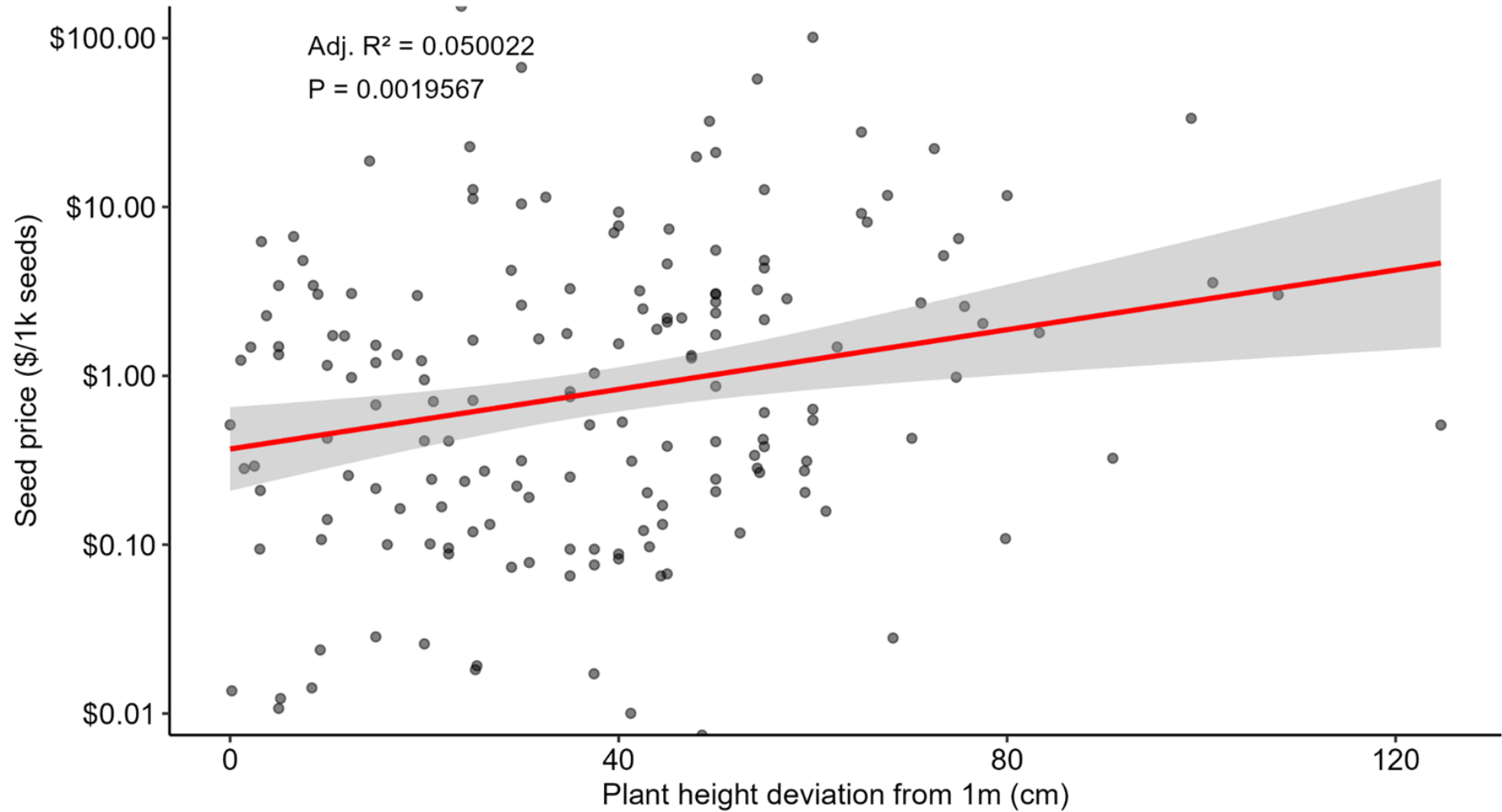
# Biological and technical factors

Early flowering species are more expensive



# Biological and technical factors

Short/tall species are more expensive



Adjusted for inflation using BLS CPI, axes log transformed



# Preliminary Results Summary

- **More species for CRP to use over time**
- **Prices change year to year, but overall price trends relatively stable**
- **CRP seed mixes getting more diverse, but not always more expensive**
- **CRP did not drive initial native seed market creation but helped expand it**
- **Prices not arbitrary-biological traits explain a lot**



# Future Work

**Regional, grouped analyses**  
**More traits and model selection**  
**Qualitative interviews**

**Analysis**  
**Publication**  
**Report**  
**Outreach**

**Seed growers, lets talk!**

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