# The Grain and Seed Industry: A New Approach

## Exports, Technology, Stewardship & Collaboration

NAEGA
North American Export Grain Association

# NAEGA Mission

Our mission is to promote and sustain the reliability of commercial agricultural commodities.

- NAEGA is the global leader in shaping commercial solutions rooted in contractual expertise, commercial knowledge and industry innovation.
- NAEGA facilitates information exchanges that identify and secure achievable precompetitive market solutions.
- NAEGA maintains a steadfast commitment to outcomes that are risk proportionate and science based.

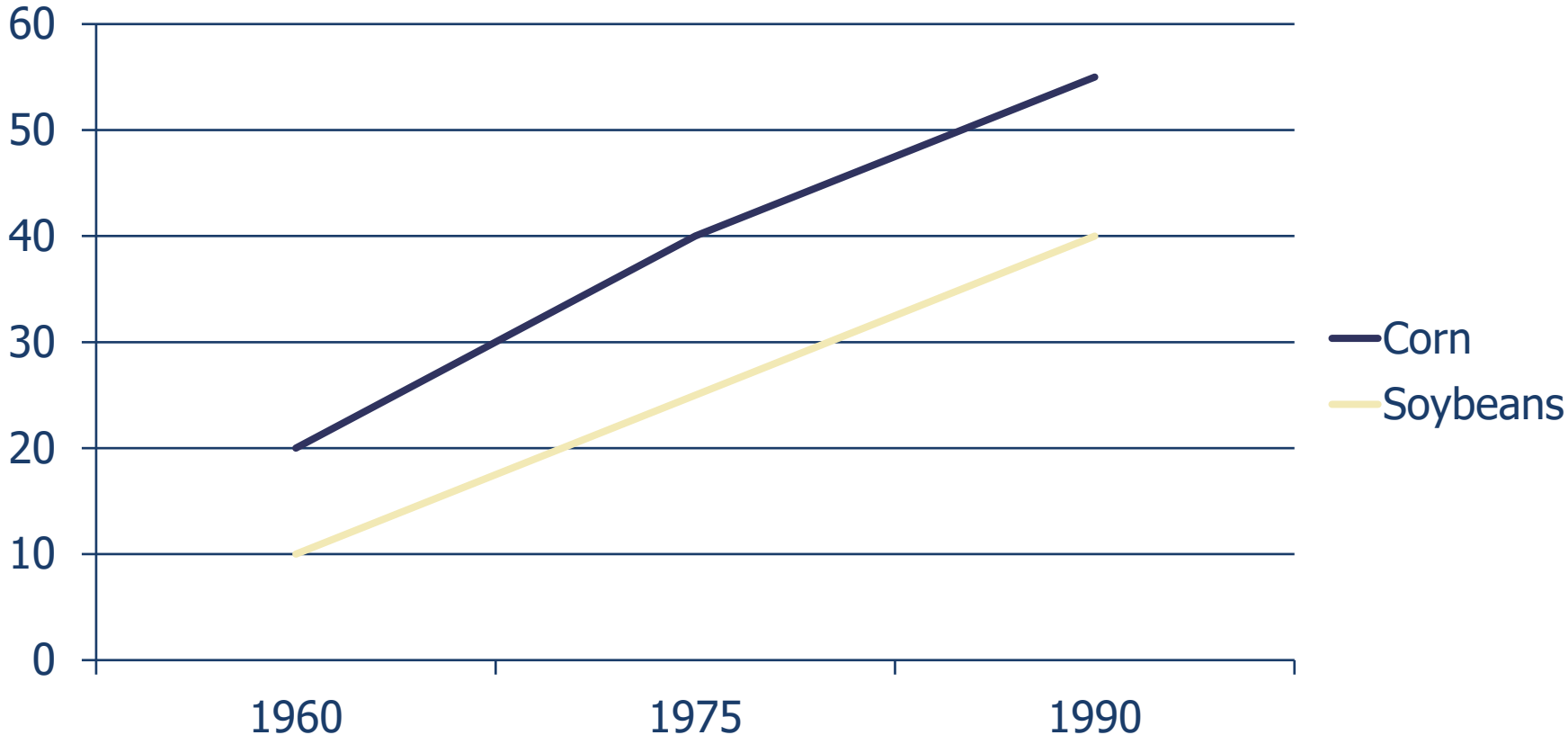

Advancing trade, fostering contract excellence

*As per 10 April 2025*

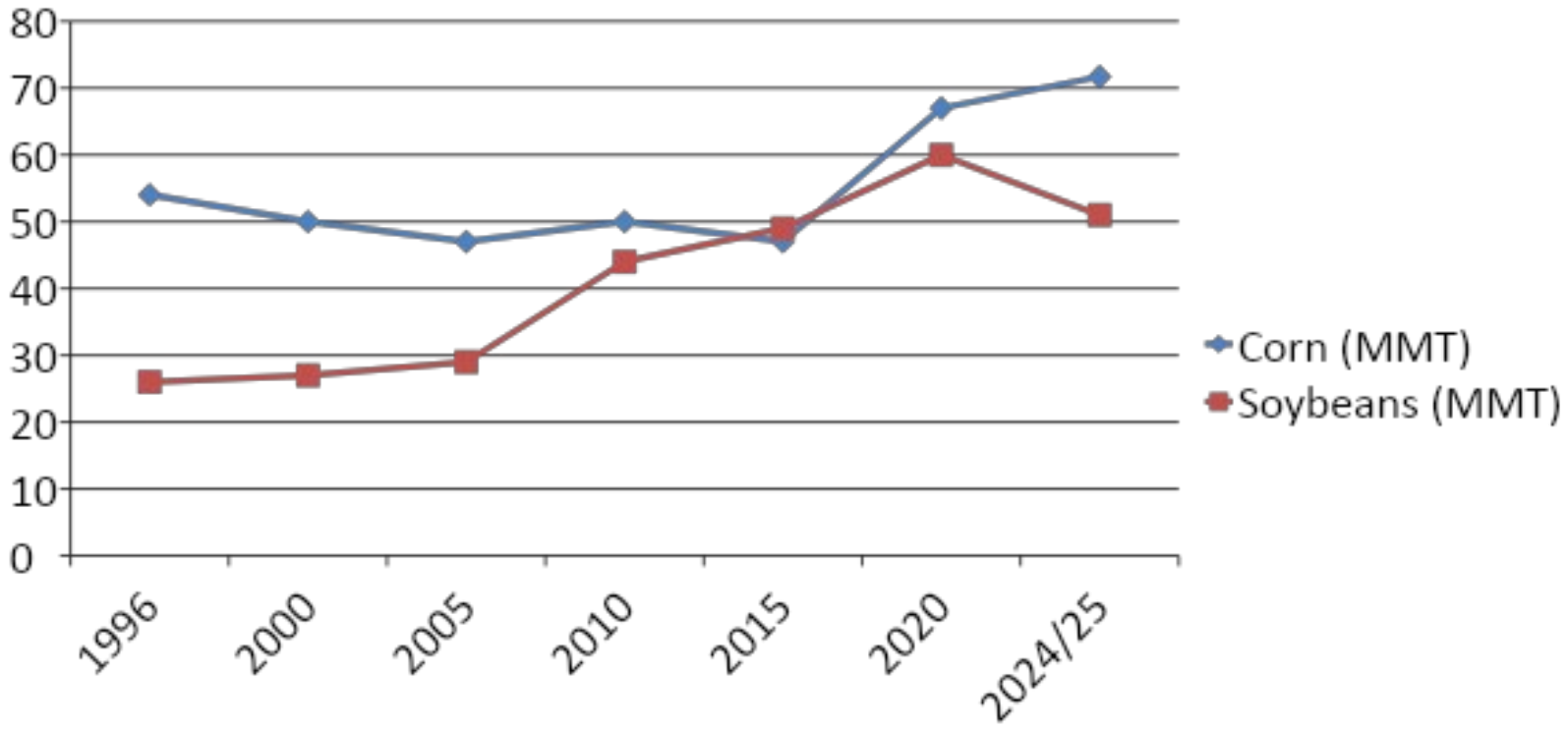
# Origins of the Seed & Grain Industry

- Early domestication of wheat, barley, corn, soybeans shaped trade routes:
  - Grain elevators & railroads enabled industrial-scale distribution
  - Commodity exchanges like CBOT formalized trade
  - Seed companies launched structured breeding in early 20th century

# Grain Exports – Before 1996 (Pre-GMO)

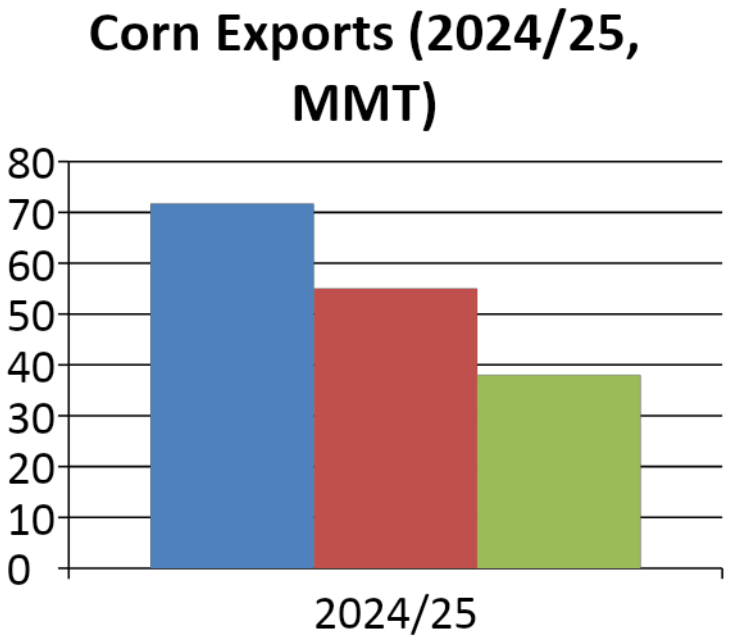


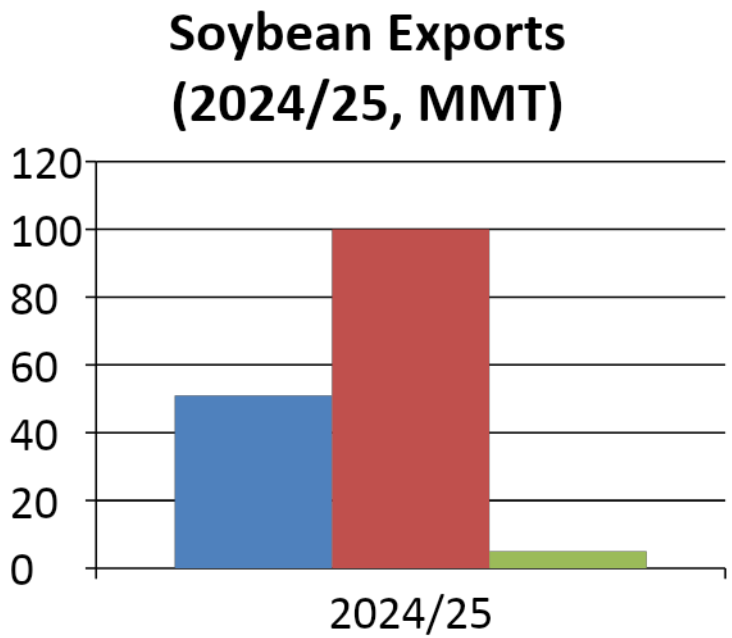
# U.S. Corn & Soybean Exports Since GMO Adoption (Marketing Years)




Source: USDA FAS (Grain: World Markets and Trade, Sep 2025) & USDA ERS (Feed Grains Yearbook; Soybeans & Oil Crops). Values indicative; latest points reflect projections.

# Corn vs. Soybean Exports – Today




Source: USDA FAS (Grain: World Markets and Trade, Sep 2025). Approximate volumes; U.S. leads in corn, Brazil dominates in soybeans.

# Key Seed Technology Milestones

- 1996: Bt corn (insect resistance)
- 1996: Roundup Ready soybeans (herbicide tolerance)
- 2009: MIR162 (Vip3A trait) – trade friction with China (2012/13)
- 2011–2020s: Stacked traits (herbicide + insect + drought tolerance)
- 2020s: CRISPR/NGTs emerging

# The Seed Approval Process

- Domestic: USDA-APHIS, EPA, FDA reviews
- International: Country-by-country approvals
- Timeline: 3–7 years per trait
- Cost: ~$150M+ to commercialize

# Stewardship

### *Definition and Role*

- Responsible management of biotech traits from lab to field to export.
- Refuge compliance.
- Proper grain channeling.
- Farmer training & monitoring.

### *Areas for Improvement*

- Enforcement gaps → resistance development.
- Unapproved traits entering trade flows.
- Communication gaps across supply chain.
- Limited accountability in global markets.

# Key Priorities for the Grain Trade

- Adoption of a comprehensive, harmonized, global regulatory approval processes that address key issues and when products need pre-market approval (transgenic, gene editing).
  - **Until such processes are in place, commercialization of genetically modified plants without prior approval by the governments in major international markets for such products should be avoided.**
  - **Where possible, governments should align and provide regulatory certainty for innovative technologies that are commercialized and require pre-market risk assessments that are commensurate with the level of risk (gene editing).**
- Partnering and engaging with grain export industry in national and international policy negotiations and advocacy.
- Regulatory decision to be risk proportionate and based on sound science.

# Continued…

- Information sharing with grain export industry on product development and commercialization timeline.
- Breeding and seed companies and other entities that are developing and commercializing seeds produced with or from genetic modification are in the best position and bear a responsibility to provide accurate, timely and authoritative information, as well as to identify and mitigate any risks associated with the marketability and consumer acceptance of such traits to avert trade disruption.
- Public outreach.

# Continued…

- Official leadership is also needed to strongly advocate for predictable and transparent approaches to improve synchrony of global regulatory authorizations as the most effective way to minimize or eliminate Low Level Presence (LLP) situations for grain, food and feed. These approaches should include bilateral or multilateral trade agreements that incorporate commitments to allow trade to continue in the instance of an LLP situation.

# Potential Areas of Collaboration & Challenges

## Collaboration

- Harmonizing biotech approvals
- Joint sustainability research
- Digital agriculture data-sharing
- Farmer–Industry partnerships

## Challenges

- Asynchronous approvals
- Public skepticism of GMOs
- IP barriers
- High compliance costs

# Thank you!

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