

The Fertilizer Institute • 2023 and Beyond

Industry Trends

Capturing the Positive Outlook and Resilience of the Fertilizer Industry







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Introduction

Industry Trends research collected in 2020 formed the foundation of TFI's current Strategic Plan. To ensure the association remains focused on the needs of the fertilizer industry, TFI conducted another survey in 2023 focused on identifying key industry challenges, opportunities, and industry sentiment.

The survey results guide initiatives and allow TFI to identify programming needs that would enhance member value and better serve the industry.

To gather this data, TFI contracted with a third party to conduct well-rounded interviews with a diverse range of professionals across the fertilizer industry. This comprehensive approach allowed TFI to gain insights from various perspectives across the industry

and provides a complete picture of where the sector views challenges and opportunities.

“Regulatory uncertainty adds significant risk to already complex decisions around capital investments and strategic planning and ultimately hinders growth & production.”

-Corey Rosenbusch



Most expect the industry's prospects to improve or stay the same.



40% of respondents believe that today's conditions for the fertilizer market are better than five years ago.



Despite significant challenges, including the COVID-19 pandemic and market disruptions, many industry players reported robust performance. Strategies such as precommitment purchases and careful planning helped weather the storm.



Respondents expressed optimism about the industry's future, with nearly 80% believing their business will be as or more profitable/successful in the next five years.



Executive Summary

The sentiment within the fertilizer industry is largely positive, with the majority of respondents anticipating an improvement or at least a maintenance of current industry prospects. 40% of those surveyed believe that the fertilizer market conditions have improved compared to five years ago. This outlook persists despite facing significant hurdles, such as the COVID-19 pandemic and subsequent market disruptions.

Many firms have reported strong performances, attributing their resilience to strategic moves like precommitment purchases and meticulous planning. Echoing this resilience, there's a prevailing optimism about the future, with nearly 80% of respondents confident that their businesses will be equally or more profitable and successful in the upcoming five years.

Pictured Left: A quick overview of some high-level takeaways listed in this report.



The background of the entire slide is a close-up photograph of several hands reaching towards a bright, glowing orb. The lighting is warm and golden, creating a sense of hope and collective effort. The hands are positioned in a way that suggests they are supporting or holding the orb together.

Skilled Labor

Government Regulations

Regulatory

Right: Industry leaders anticipate challenges in the following areas

5-Year Outlook

Looking ahead over the next five years, **half of the respondents are optimistic, expecting their businesses to be more profitable.** However, industry leaders are preparing to navigate various anticipated challenges, including regulatory uncertainty, stringent government regulations, a scarcity of skilled labor, and the ever-present geopolitical risks that can impact market stability.

Uncertainty

Geopolitical Risks

Industry & Corporate Outlook

Industry professionals are overall positive about where the market is today and optimistic about future profitability. Manufacturers are driving this optimistic outlook.

While half of the respondents believe that their organizations will see a rise in profits over the next five years, this optimism is even more pronounced among manufacturers, with 62% predicting higher profitability for their operations.

The biggest threat to innovation in the fertilizer industry is ill-concieved regulatory actions that come with significant opportunity costs and no real benefit.

Right: In the next five years, respondents expect profitability of your organization or business unit to be...

Less Profitable

15%

Not sure

6%

About the Same

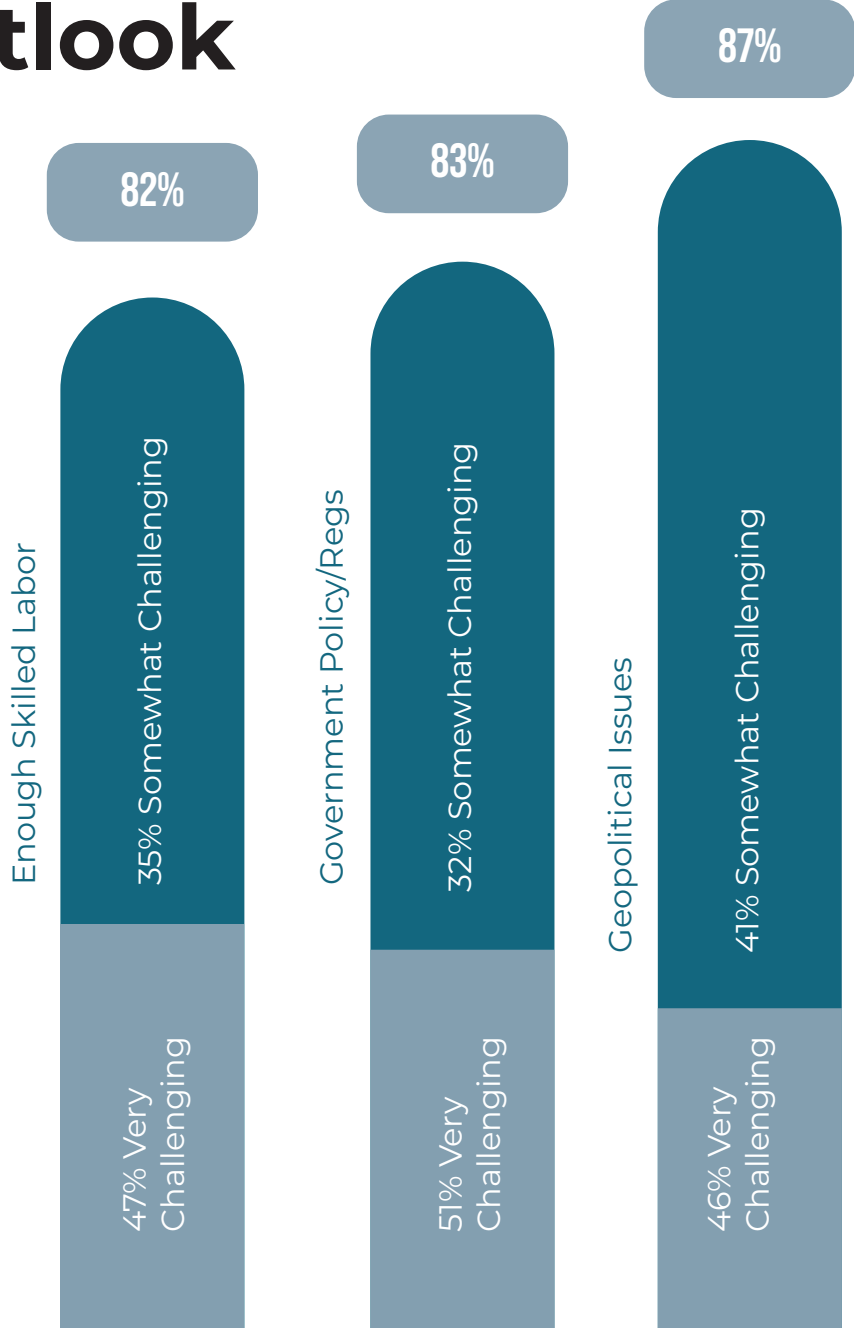
29%

More Profitable (62% for Manufacturers)

50%

Market Outlook

Right: Top Industry Challenges



88%

Regulatory Uncertainty

31% Somewhat Challenging

57% Very Challenging

Regulatory uncertainty was identified as the industry's top challenge, followed by government policy and regulations. A shortage of skilled labor is also a challenge for U.S. companies – retailers, wholesalers, and mid-sized companies specifically.

Below: Compared to five years ago, the fertilizer market environment for your business is...

40% Better
29% About the Same
24% Worse
7% Not Sure



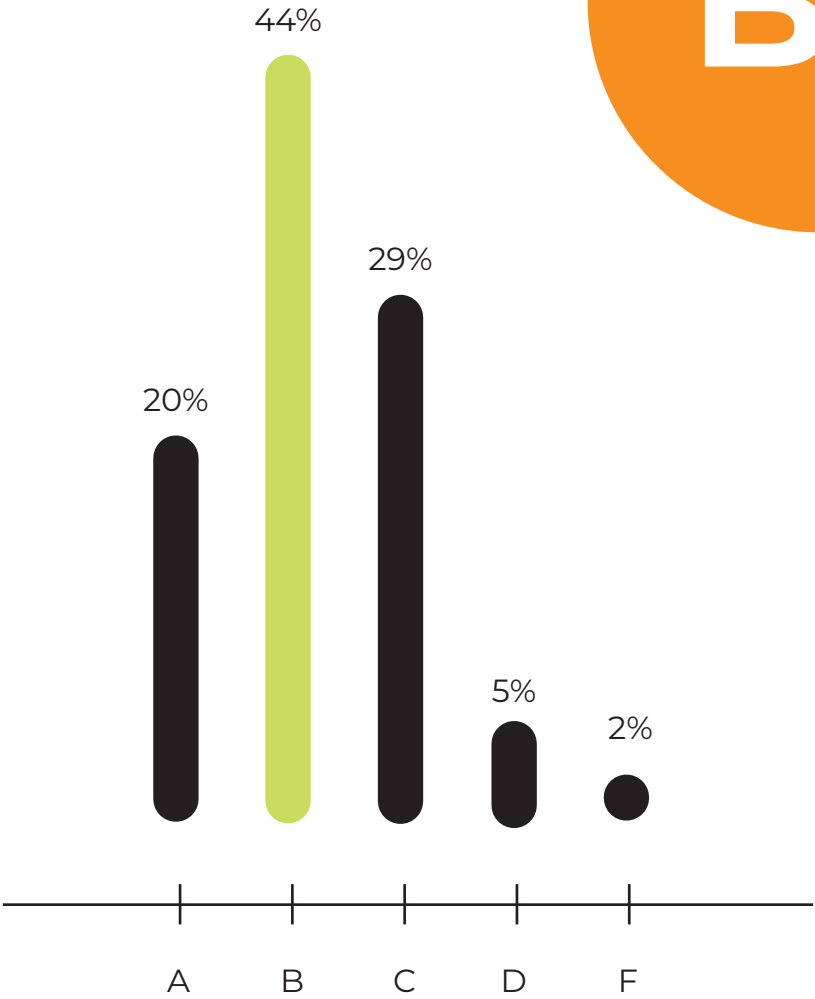
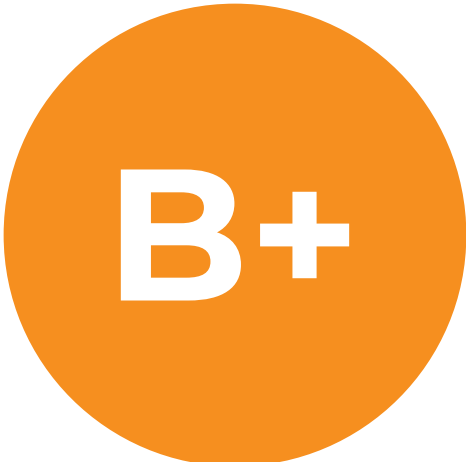
Industry Communications

Almost two-thirds of respondents (64%) rate the industry's communication about the significance of fertilizer and its role within the agriculture sector with high marks, granting it either an A or B for being "great" and "good," respectively.

Collectively, the industry has been awarded a B+ for its efforts, showing positive progress from the B grade received in 2021. In recent years, the heightened attention on fertilizer and food security has shed light on its critical role in the food supply chain and the industry's initiatives towards

enhancing efficiency. This context presents a continued opportunity for the industry to proactively share its positive contributions and stories.

Right: Thinking back to the last 24 months, what letter grade do you give to The Fertilizer Institute's efforts to communicate the importance of fertilizer?



TFI Alignment

TFI is committed to staying in sync with the evolving challenges and opportunities in the fertilizer industry. Currently, 73% of those surveyed view TFI as either “extremely” or “very” aligned with the **industry**, and 53% believe TFI is more aligned than three years ago. Opportunities remain to continue to diversify programming and value propositions to different industry segments, reflected by only 43% of respondents believing that TFI is “extremely” or “very” aligned with **their company’s** specific challenges and growth opportunities.

Right: TFI alignment
with Fertilizer Industry

22% Somewhat aligned

5% Not aligned





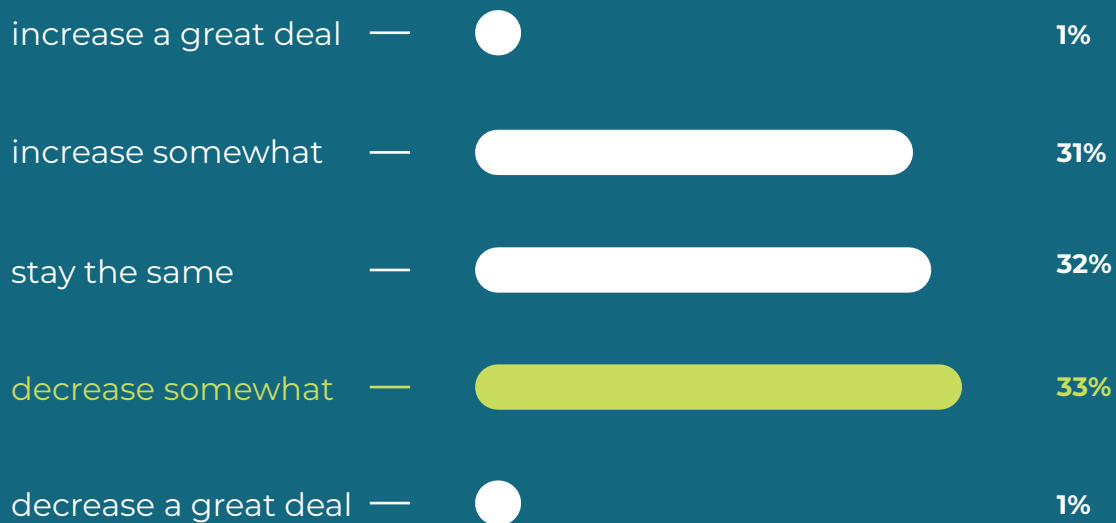
73%

Reported either extremely aligned or very aligned
(15% Extremely aligned, 58% Very aligned)

Factors for Growth

Opinions are divided among respondents regarding whether the demand for traditional N, P, and K fertilizers will significantly change with the introduction of innovative technologies in the next 3-5 years.

Below: With the rapid introduction of innovative fertilizer technologies, in the next 3-5 years, do you anticipate the demand for traditional N, P, K to...



Improving biologicals, advancing NUE, nutrient stewardship, anything related to decarbonization of the food system; micro-nutrient blending and better available nutrients.

Bio-stimulants and biologicals.

Precision applications and bio developments.

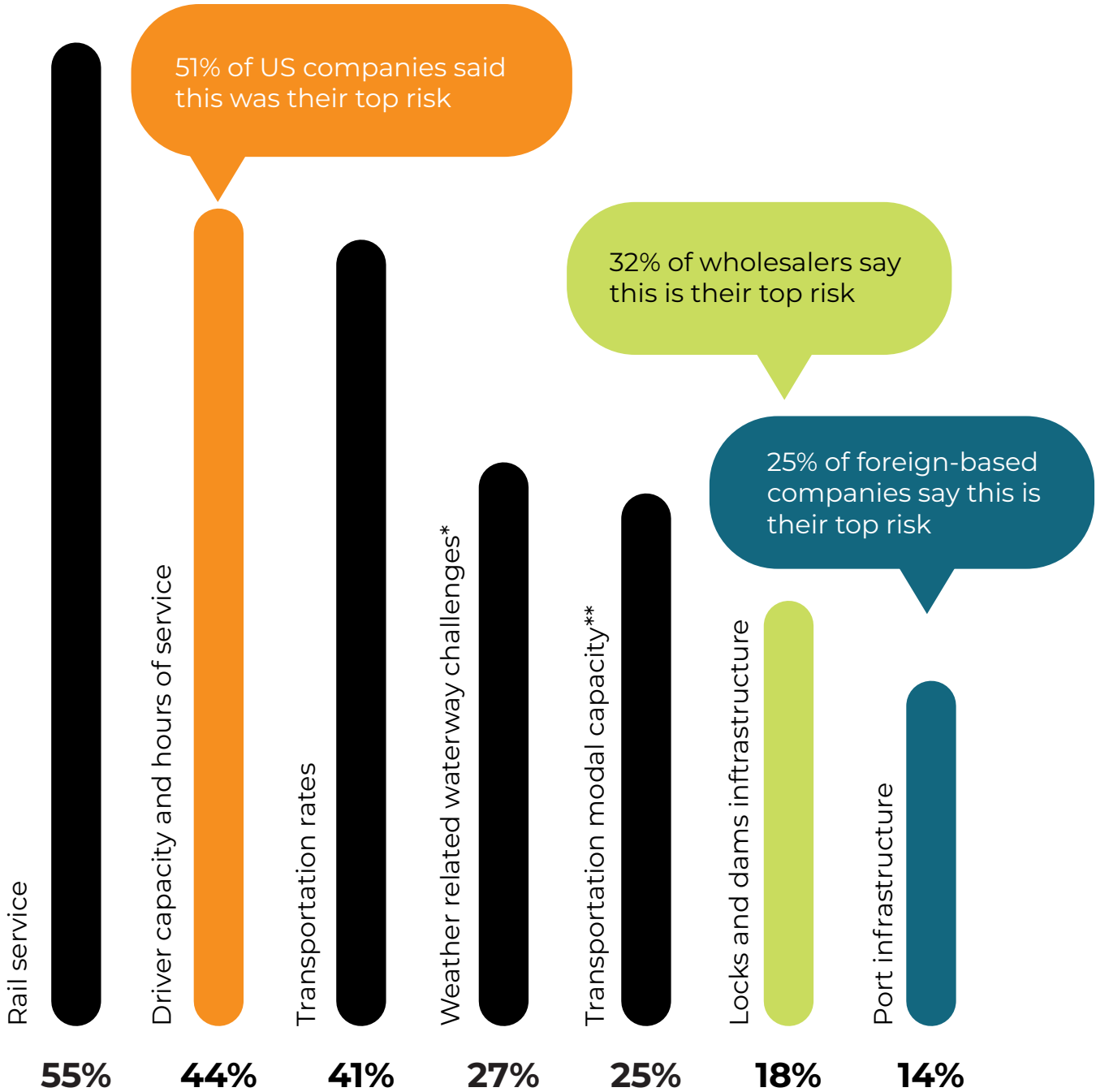
Industry leaders think that their most promising opportunities are in the areas of biologics and nutritional improvements.

CME contracts for each major fertilizer product.

Increased use of hedging instruments


Futures and options.

The top two responses on what could mitigate market volatility are better hedging tools and regulatory certainty, which include suggestions like “CME contracts for each major fertilizer product,” “Futures and options,” and “Increased use of hedging instruments.”



External Impacts

Rail service is viewed as the primary vulnerability in the supply chain, followed by concerns such as driver capacity, transportation rates, weather-related waterway challenges, and capacity issues across various transportation modes.



Enhancing the transportation of fertilizer products in the US will expedite the responsiveness of supply to meet farmers' needs during variable fall and spring weather conditions.

Left: Supply Chain Logistics Risks; respondents selected top three.

*drought & flooding

**truck, barge, rail, marine

Very Likely

4%

*Not sure 6%

Somewhat Likely

11%

Neither Likely
Nor Unlikely

Somewhat Unlikely

31%

Very Unlikely

11%

Impact on Farmers

67% of industry professionals believe it is unlikely that U.S. farmers will bear the additional input costs of adopting low-carbon manufactured fertilizers, such as green or blue ammonia, without incentivization measures within the next 3 to 5 years.

36%

Left: What is the likelihood that U.S. farmers will pay additional input costs without incentivization for using a low carbon manufactured fertilizer in the next 3-5 years (i.e., green /blue ammonia)?



The background of the entire page is a close-up photograph of dark brown mulch, showing small twigs and organic matter. A solid teal-colored horizontal band spans across the middle of the page, serving as a backdrop for the text.

Conclusion

The Fertilizer Institute's 2023 Industry Trends Survey has yielded critical insights into the agriculture and fertilizer sectors, revealing a resilient and forward-looking industry. Despite the ongoing challenges, including those posed by the COVID-19 pandemic, the industry displays a strong sense of optimism. It is committed to sustainable practices and actively exploring the potential of

new technologies. Key focus areas, such as policy, supply chain management, and skill development, are being addressed to ensure continued growth and resilience. This survey highlights the dynamic nature of the industry, as well as the proactive steps stakeholders take to navigate and thrive in this ever-changing landscape.

About the Industry

Fertilizer is crucial in enhancing crop yields and ensuring food and national security. It's estimated that fertilizers contribute to nearly half of the global food production. In the last four decades, farmers in North America have more than doubled their crop output while farming on approximately the same land area, in large part due to the effective use of fertilizers.

The efficiency of fertilizers in agriculture extends beyond just increased production. It also involves the enhancement of crop quality and soil health.

After the harvest, the soil needs additional nutrients. Although some

nutrients in the soil are naturally replenished, this is a slow process and may not provide the necessary nutrients for new crops in a timely manner. Fertilizer restores the viability of the topsoil by supplying essential nutrients that might be deficient. Fertilizers ensure that crops receive a balanced diet, which helps nourish the food that nourishes us.

The U.S. fertilizer industry helps farmers grow crops sustainably in every state. On a national basis, the industry is responsible for more than 487,000 jobs and generates over \$130 billion in economic activity.

This is a basic problem,
to feed 6.6 billion people.
Without fertilizer, forget
it. The game is over.

-Norman Borlaug





85% TFI Members
 3% Lapsed Membership
 7% Never Members
 5% Don't Know



22% CEO/Owner
 19% Other C-Suite
 58.8% Other Job Title



69% U.S. Respondents
 31% International Respondents



65% Private Companies
 29% Public Companies

The demographics of the participants in this survey included both international and domestic companies, as well as members and non-members.

The Fertilizer Institute surveyed individuals across the fertilizer supply chain, including members and industry non-members globally. A survey was completed by 131 industry professionals, including 112 TFI members.





