

Checking progress in 2022: How is the year developing?

In January, we dedicated a special edition of *Groundwork* to highlighting 11 topics anticipated to be challenges or areas for opportunity for farmers in 2022. Ranging from volatility in the commodity markets to extreme weather and the potential for regulatory changes, these areas had the potential to affect your business and your customers. However, one event that was not on the agricultural radar in December or January—Russia's invasion of Ukraine. That action at the end of February has had numerous implications for farmers in the U.S. Below, we'll look back at some of the predictions and follow up regarding how the situations are playing out.

Along with several other multinational corporations, Corteva Agriscience stopped production and business activities in Russia in April and has focused on supporting and providing aid to colleagues, customers and communities where Corteva operates in Ukraine. Corteva is planning to donate seeds to Ukraine, Africa and the Middle East for the 2023 growing season to support global food security.



Input costs and availability

The situation: Ongoing supply chain issues and unanticipated events—like the freeze in Texas—have increased the cost for multiple inputs and made sourcing trickier, especially for some products like fertilizer. The suggestion in January was to lock in purchases sooner rather than later to reduce upside risk. Digital tools help assess the value gained from inputs and help guide long-term management or in-season decisions.

As it stands now: Ongoing concerns about higher input costs and input availability have reduced many farmers' outlooks for the year, according to responses in Purdue University's Ag Economy Barometer. The prediction from the farmers surveyed was that input prices could increase by 20% to 30% in the upcoming year. Others reported having challenges finding inputs for this year with herbicides, fertilizer and farm machinery parts being the top products seeing supply chain problems.¹ The conflict in Ukraine will also add more disruption to the international fertilizer market. Russia is one of the largest exporters of fertilizers, producing 23% of ammonia exports, 14% of urea, 10% of processed phosphate and 21% of potash.² The CME Futures contract in April shows a 39% surge in price for diammonium phosphate (DAP) fertilizer following Russia's invasion, and prices had already been high.³ Although there is a fertilizer production industry in the U.S., increasing global prices will also raise domestic ones. The changes could have multi-year implications, as new production facilities have been proposed.

Additionally, a recent finding from the U.S. Department of Commerce anticipates applying duties to urea ammonium nitrate fertilizer from Russia and Trinidad and Tobago. The review found that the countries were unfairly subsidizing exports of the fertilizer.⁴ The ruling has the potential to again increase fertilizer prices. The potential for continued high input costs suggests that farmers should look to protect any nutrients added or ways to improve use efficiency. This could include taking steps like changing when or how nutrients are applied, taking advantage of nitrogen stabilizers from Corteva's Nutrient Maximizer portfolio including N-Server® nitrogen stabilizer, Instinct NXTGEN® nitrogen stabilizer which keep nitrogen in the rootzone longer to maximize yield potential. PinnitMax® TG nitrogen stabilizer, prevents volatilization for up to 14 days.



Global disruption to trade is expected to keep input costs high into next year.



Volatile commodity markets

The situation: Initially, farmers were advised to be aware of the potential for increased volatility in the commodity markets. The challenge with daily changes in pricing is maximizing returns without locking in too much of the crop.

As it stands now: The rule of thumb remains in place—look back on your farm's history and consider the worst crop year and yield you've experienced. For example, if it was a 50% loss, then consider pricing no more than half the crop before harvest. Additionally, be aware that, with the ongoing uncertainty coming out of situation with Ukraine, commodity prices remain high. Tightening stocks for grains and oilseeds continue to be predicted, stemming from embargoes on Russia, along with concerns that farmers in Ukraine may not get their entire crop planted or harvested and exported. Both countries are important to the export of wheat, corn and oilseeds, and the ongoing conflict has sparked export bans and restrictions on sales of domestic supplies in several countries, according to USDA's Foreign Agricultural Service.⁵



With closing export markets, tight grain stocks and changing practices, grain and oilseed prices are expected to remain volatile into 2023.



Trade and market changes

The situation: Trade supports farmer income, and in 2021, producers faced a volatile market still recovering from the ongoing pandemic-related supply chain disruptions. Although there were some positive elements, including the Phase One trade deal with China, uncertainty about global markets remained. Export market changes may not always be easy to predict, and the recommendation was to follow grower advocacy groups dealing with trade issues.

As it stands now: The situation between Ukraine and Russia calls into question exports from countries that grow 34% and 18% of globally traded wheat and corn crops, respectively, along with 75% of globally traded sunflower seed oil.⁶ This disruption has raised international concerns about global food security.⁶ It is also expected to prompt some protectionist actions as countries seek to export less of their internally grown crops or increase export taxes on oilseeds and related products.⁵

However, these changes can also bring new opportunities for U.S. farmers as alterations in the global trade patterns could be an opportunity to sell more crops to markets traditionally served by Russia.⁶ It may also mean more interest from buyers in China and/or the EU.⁶ Traditionally, the EU has purchased grains like corn from Ukraine, but with that market diminished, they will need to turn to new sources. Similarly, the potential for less feed wheat to be on the market could increase sales and prices of corn.⁶ U.S. corn export to the EU for the first 9 months of the marketing year are over 700,000 MT. This is more than the three previous years combined. Some predictions call for higher commodity prices through 2023, with inventories becoming more normal in 2024.⁷ However, increased commodity prices must also be balanced with the rise in input costs.

Increased trade opportunities, however, must be coupled with concomitant advancement in importing countries of predictable, science-based regulatory policies for biotechnology. U.S. growers access to the latest innovation is critical to boost productivity, sustainability, and allow growers to be better positioned to meet challenges like climate change. For example, Mexico's biotechnology and crop protection regulatory systems have become increasingly unpredictable, and politicized, which affects products being developed for U.S. farmers. To date, Mexican regulators have to date rejected 14 biotech food and feed import applications for corn, soy, and cotton.



Choosing between traited soybean systems

The situation: In 2021, there was a national discussion about changes in how some herbicides could be applied to soybeans, following new regulations. However, there were still about 3,500 reported complaints from soybean crop damage connected to dicamba drift into non-tolerant soybean acres.⁸ This was anticipated to add additional importance to the selection process for traited soybeans. To make that decision, farmers need to know what types of weeds and resistant weeds they need to manage and consider elements including the herbicide application process, drift potential, tank-mix options and yield.

As it stands now: With the tightening global market for oilseeds and the potential loss of oilseed crops from Russia and Ukraine, along with internal restrictions on exporting that some countries have established, there could be increased tightness in the global soybean market in coming years.⁹ Russia and Ukraine are major exporters of alternative oilseeds, including safflower and sunflowers, potentially adding importance to soy production.³

The increasing costs of field inputs, like fertilizers, may also push more farmers toward adding soybean acres.² Both elements make it increasingly important to select traited soybeans that are easier to manage and provide excellent yield potential.

¹ Mintert, James, and Michael Langemeier. "Ag Economy Barometer Slides Lower, Producers Concerned About War's Impact on Input Prices." Purdue Center for Commercial Agriculture. Updated April 5, 2022. <https://ag.purdue.edu/commercialag/ag-economy-barometer-slides-lower-producers-concerned-about-wars-impact-on-input-prices/>.

² Smith, Linda. "War in Ukraine: Risks and Opportunities for U.S. Farmers." *Ag Web* April 20, 2022. <https://www.agweb.com/markets/market-analysis/war-ukraine-risks-and-opportunities-us-farmers>.

³ Cosgrove, Tom, and Chris Laughton. "The Impact of the War in Ukraine on the U.S. Agricultural Economy." Farm Credit East Knowledge Exchange, April 2022. <https://www.farmcrediteast.com/resources/Industry-Trends-and-Outlooks/Reports/the-impact-of-the-war-in-ukraine-on-the-us-agricultural-economy>.

⁴ Tomson, Bill. "Commerce rules fertilizer imports were subsidized, dumped in US." *AgriPulse*, June 23, 2022. <https://www.agri-pulse.com/articles/17898-commerce-rules-fertilizer-imports-were-subsidized-dumped-in-us>.

⁵ USDA Foreign Agricultural Service. "The Ukraine Conflict and Other Factors Contributing to High Commodity Prices and Food Insecurity." International Agricultural Trade Report, April 6, 2022. <https://www.fas.usda.gov/data/ukraine-conflict-and-other-factors-contributing-high-commodity-prices-and-food-insecurity>.

⁶ Sheldon, Ian, and Chris Zoller. "How Will the Invasion of Ukraine Affect U.S. Agriculture?" The Ohio State University Ohio Ag Manager: Management Information for Today's Agricultural Business. Updated April 5, 2022. <https://u.osu.edu/ohioagmanager/2022/04/05/how-will-the-invasion-of-ukraine-affect-u-s-agriculture/>.

⁷ Domm, Patti. "A fertilizer shortage, worsened by war in Ukraine, is driving up global food prices and scarcity." CNBC, April 6, 2022. <https://www.cnbc.com/2022/04/06/a-fertilizer-shortage-worsened-by-war-in-ukraine-is-driving-up-global-food-prices-and-scarcity.html>.

⁸ Unglesbee, Emily. "EPA Details Dicamba Damage: EPA publishes dicamba damage report, but says label changes unlikely in 2022 season." *Progressive Farmer*, December 21, 2021. <https://www.dtnpf.com/agriculture/web/ag/crops/article/2021/12/21/epa-publishes-dicamba-damage-report>.

⁹ Wood, Mary. "Food Markets Face Major Impact From Ukraine Conflict." University of Virginia: News and Media, April 26, 2022. <https://www.law.virginia.edu/news/202204/food-markets-face-major-impact-ukraine-conflict>.

* * Trademarks of Corteva Agriscience and its affiliated companies Instinct NXTGEN® and PinnitMax® TG are not registered for sale or use in all states. Contact your state pesticide regulatory agency to determine if a product is registered for sale or use in your state. Do not fall-apply anhydrous ammonia south of Highway 16 in the state of Illinois. Always read and follow label directions. © 2022 Corteva.