AgWest FARM CREDIT

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MARKET SNAPSHOT

Crop Inputs

Dec. 31, 2022

Executive summary

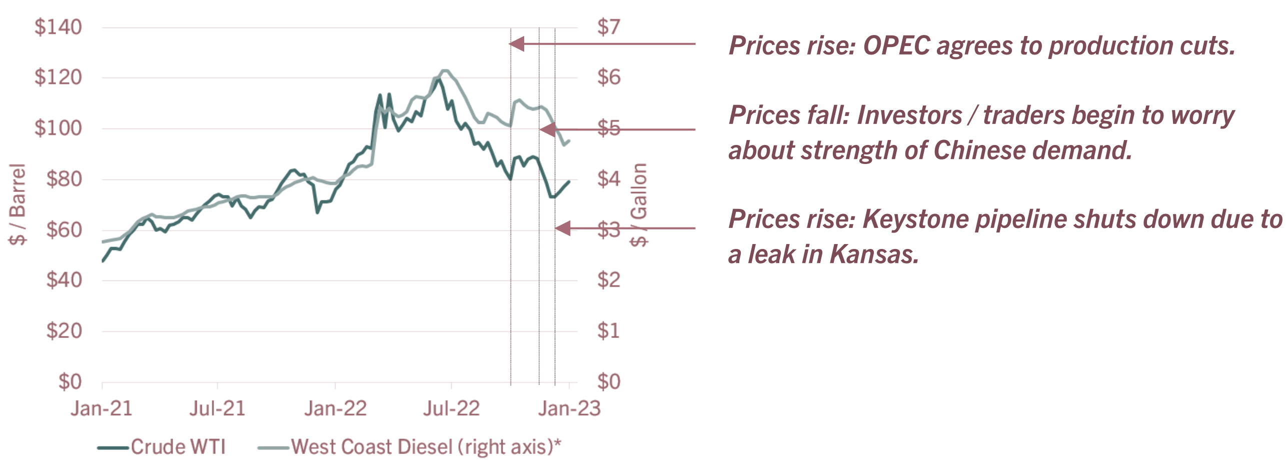
Drivers for crop inputs include volatile energy markets, falling fertilizer and logistics costs, rising labor costs and improving farm machinery and equipment availability.

Industry drivers

Energy prices volatile

Energy prices had another volatile quarter. Primary drivers include lower demand from traders anticipating a recession, production cuts by the Organization of Petroleum Exporters (OPEC), COVID-19 lockdown curtailments (and subsequent virus outbreaks) in China, the Keystone pipeline shutdown and continued rapid drawdown of strategic petroleum reserves (SPR). Diesel inventories are improving; however, diesel's price spread with crude oil remains wide as Europe increases consumption of U.S. supply. Currently, demand seems to be falling faster than supply and generally poor sentiment on economic conditions may limit potential upward moves over the next several months.

Crude Oil and Diesel Prices



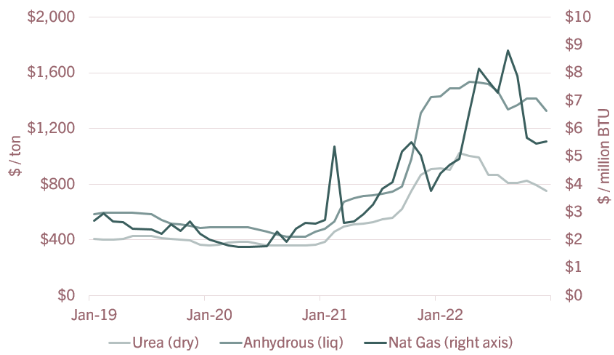
Source: Energy Information Agency. *Excludes California.

Fertilizers trending down

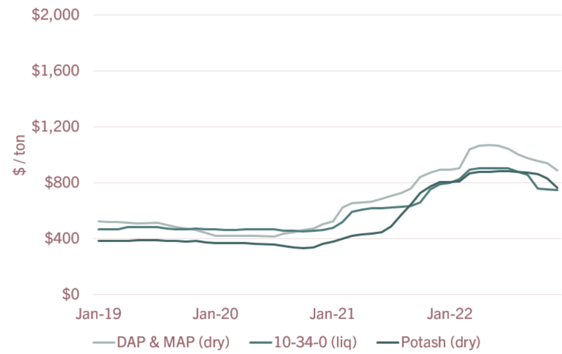
Fertilizer prices remain historically high but are trending down. Aggregate demand has fallen as many farmers reduce application levels to manage costs and corn prices appear to be flattening (fertilizers often follow grain markets despite their underlying supply and demand conditions). In addition:

- **Nitrogen** - Natural gas (the primary input) prices have moved lower on the delayed reopening of an export facility in Freeport, TX (decreased ability to export leads to higher U.S. supplies) and warmer than expected winter weather in the U.S. and Europe. European production remains low; however, anecdotal reports suggest a recent uptick due to falling natural gas prices.
- **Phosphate** – While global demand for most fertilizers has come down due to high prices, this appears especially true for phosphate. This has improved supply and demand conditions, and some expect prices to soften in 2023.
- **Potash** – Increased production in Canada has helped to offset falling supply out of Belarus and Russia. Current global inventory levels are adequate and suggest prices should continue to soften.

Nitrogen Fertilizer and Natural Gas Prices



Phosphate and Potash Fertilizer Prices



Source: DTN Retail Fertilizer Trends. Liq: Liquid Fertilizer. Dry: Dry Fertilizer.

Logistics rates falling

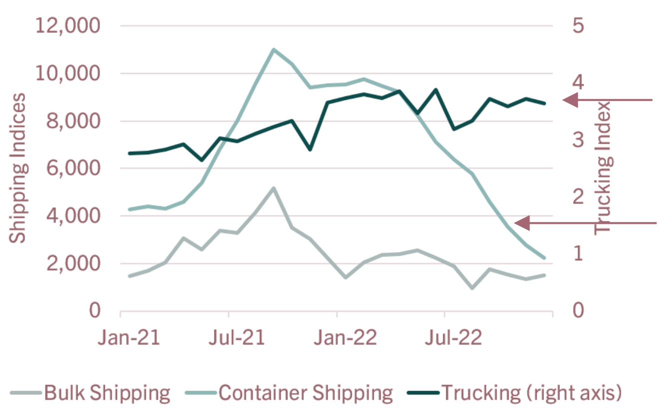
Trucking – Rates turned slightly negative year over year in December due to lower goods demand, but remain 45% above their five-year average. The outlook for 2023 varies widely, with industry professionals seeing both an upside (business inventories depleting later in 2023) and downside (economic recession) for price moves. Ultimately, much will depend on consumers' willingness to buy goods.

Container shipping – Rates are approaching pre-pandemic levels as improving port conditions and lower consumer spending have increased vessel supply. The price ratio of routes to/from East Asia and West Coast North America improved significantly in favor of U.S. exporters, suggesting it is increasingly easier to procure cargo space.

Dry bulk shipping – Rates were relatively flat this quarter and some in the industry are anticipating a two- to three-year downcycle due to deteriorating trade conditions. The bulk fleet is relatively old (12% is older than 20 years) and current new build rates are relatively low. As more ships retire, total supply should come down and provide a price floor despite lower demand. China emerging from COVID-19 lockdowns and implementing stimulus to its steel industry may also support prices in 2023.

Seaports – Ports have largely moved through COVID-19-related bottlenecks. Unfortunately, East Coast ports have taken on a greater share of import volumes due to prolonged negotiations between West Coast dockworkers and their employers (supply chain managers are worried about a labor strike).

Trucking, Dry Bulk and Contain Shipping Price Indices



Trucking rates have been more resilient than shipping.

Container rates are down 80% from September 2021 highs but remain about 160% above pre-pandemic levels.

Source: Dry Baltic Index, Freightos Global Container Index, Cass Freight Index.

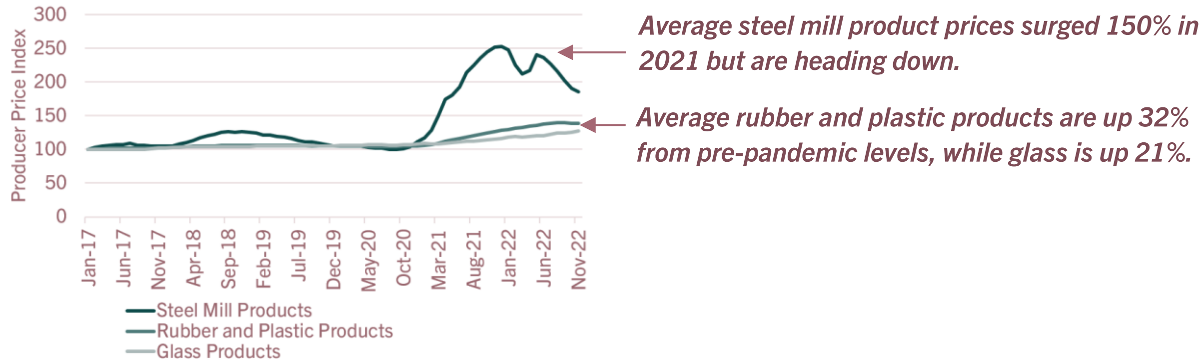
Labor costs to rise

In Washington, minimum wage is now the highest in the country after increasing to $15.74, up 8.6% from 2022. As part of a phase-in process, overtime eligibility for agriculture workers will now begin at 48 hours/week (this will decrease further to 40 hours in 2024). Dairy employees are the exception as they've been eligible at 40 hours/week since 2020. In Oregon, overtime eligibility for agriculture workers will begin after 55 hours/week (this will decrease to 48 hours in 2025 and settle at 40 hours in 2027).

Farm equipment supply and costs improving, but risks persist

The cost and availability of farm equipment appears to be stabilizing as the world moves away from pandemic lockdowns. Input prices like steel are abating (see chart on next page), transportation bottlenecks have eased (see shipping and trucking sections) and manufacturers are readjusting their supply chains to improve resiliency.

Steel, Rubber, Plastic and Glass Product Price Indices



Source: Bureau of Labor Statistics; Producer Price Index measures how prices have changed over time for a basket of goods.

Unfortunately, geopolitical and economic risks continue to rise. Manufacturing supply chains are highly complex and international systems designed to balance efficiency with resiliency (where a company falls on this spectrum depends on their own business strategy). Manufacturers with a greater share of raw material sourcing and product production within North America should be more resilient to international shocks; however, there are long-term offshore dependencies.

- **Natural rubber** is cultivated almost exclusively in southeast Asia. Its abrasion resistance, elasticity, adherence and impermeability make it almost irreplaceable. Manufacturers combine it with synthetic rubber compounds, along with over 200 other materials, to produce tires, belts and conveyors.
- **Microprocessors** fall into three categories: high-end (produced in the U.S., Taiwan, Japan and South Korea), mid-range (Thailand and Malaysia) and low-end (China). Tractors, combines, harvesters and other farm equipment are increasingly sophisticated and rely on imported, mid-range chips.

Southeast Asia forms a critical link within farm equipment supply chains. Manufacturers cannot easily substitute natural rubber or produce it in North America. U.S. microprocessor production capacity (including newly announced investments) is for high-end uses (computers, satellites, etc.). The biggest risk factors may include China's emerging military presence in the South China Sea and its evolving relationship with the U.S. If tensions worsen, there may be downstream impacts to farm equipment and machinery supply chains. Currently, southeast Asia is relatively stable and has strong political and trade relationships with the U.S., Canada and Mexico.

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