

Fertilizer prices on the rise; here's why

Fertilizer prices are rising again. This from Bruce Erickson, Ph.D., Purdue University in his latest TurfTip e-newsletter. Here he details his findings.

Why so high?

Fertilizer prices are on the upswing again, buoyed by the high prices of agricultural products that have stimulated increased demand. While the general U.S. economy struggles to recover from the financial crisis of 2008, the demand for agricultural products continues in a strong position due to favorable exchange rates, grain usage for biofuels, production concerns related to recent unfavorable weather in key crop growing regions, and a host of other factors. Higher fertilizer prices have put heavy users, such as farmers, lawn care companies, and golf course superintendents, on the defensive trying to best manage the input costs of their businesses. The following explains some factors that influence fertilizer prices and possible strategies in dealing with high and fluctuating prices.

Prices Influenced by World Markets and Energy Fertilizer prices reached record levels in 2008 just prior to the financial crisis, with the prices of some key fertilizer materials, such as anhydrous ammonia and diammonium phosphate, exceeding \$1,000 per ton. Prices retreated in 2009 and 2010, but began increasing again last fall. The price of urea is approximately twice what it was a decade ago. In the 1980s, the U.S. was a significant nitrogen exporter —

now more than 57% of nitrogen used in the U.S. is imported (2008 data). Most commercial nitrogen fertilizers originate from a process that uses natural gas to convert the nitrogen gas in the air into a form usable by crops. Natural gas prices in other parts of the world are a fraction of what they are in the U.S., so it is often more economical to produce there even considering transportation costs. Trinidad and Tobago, Canada, Russia and the Middle East are major suppliers to the U.S.

Phosphorus (P) and Potassium (K) fertilizer sources such as DAP (Diammonium phosphate, 18-46-0) and muriate of potash (0-0-60) originate mostly from open or underground mines, with the bulk of production controlled by a handful of companies. The U.S. is the world's leading supplier/exporter of phosphorus fertilizers, but imports most of its potassium from Canada. Investments in fertilizer mining and manufacturing are often long-term commitments, and companies often lack the ability to adjust quickly to short-term market conditions.

Fertilizer pricing is complex

Fertilizer is not traded on a common exchange like stocks, currencies or grains, so it can be much more difficult to get a read on prices. In addition, fertilizers are heavy, bulky commodities and their transport involves expense, time and logistical constraints. Many customers also depend on their suppliers for fertilizer storage and specialized application equipment. So the market is not as fluid as many other inputs — users aren't



as likely to shop around and then just go pick up what they need as they might for chemicals or seeds.

Dealing with high fertilizer prices

Using the correct form and amount of fertilizer to achieve the desired plant response maximizes efficient input use and keeping costs in check. Fertilizer suppliers may be willing to enter into contractual arrangements with their larger customers that specify a future quantity and price, to help them manage their own price risk as well as that of their customers. In addition, some larger fertilizer users have also built their own bulk storage facilities that allow them to capitalize on seasonal price advantages or other price trends.

For more information on fertilizer pricing, check out:

› Illinois Production Costs Report, Illinois Department of Agriculture: http://www.ams.usda.gov/mnreports/gx_gr210.txt

› Agricultural Prices, United States Department of Agriculture: <http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1002>

› Factors Shaping Price and Availability of the Fertilizer Market, Purdue Agricultural Economics: http://www.agecon.purdue.edu/news/financial/Fertilizer_Market.pdf

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