

FERTILIZER MARKETS GONE HAYWIRE! WHEN TO PULL THE TRIGGER ON EXTRA POUNDS?

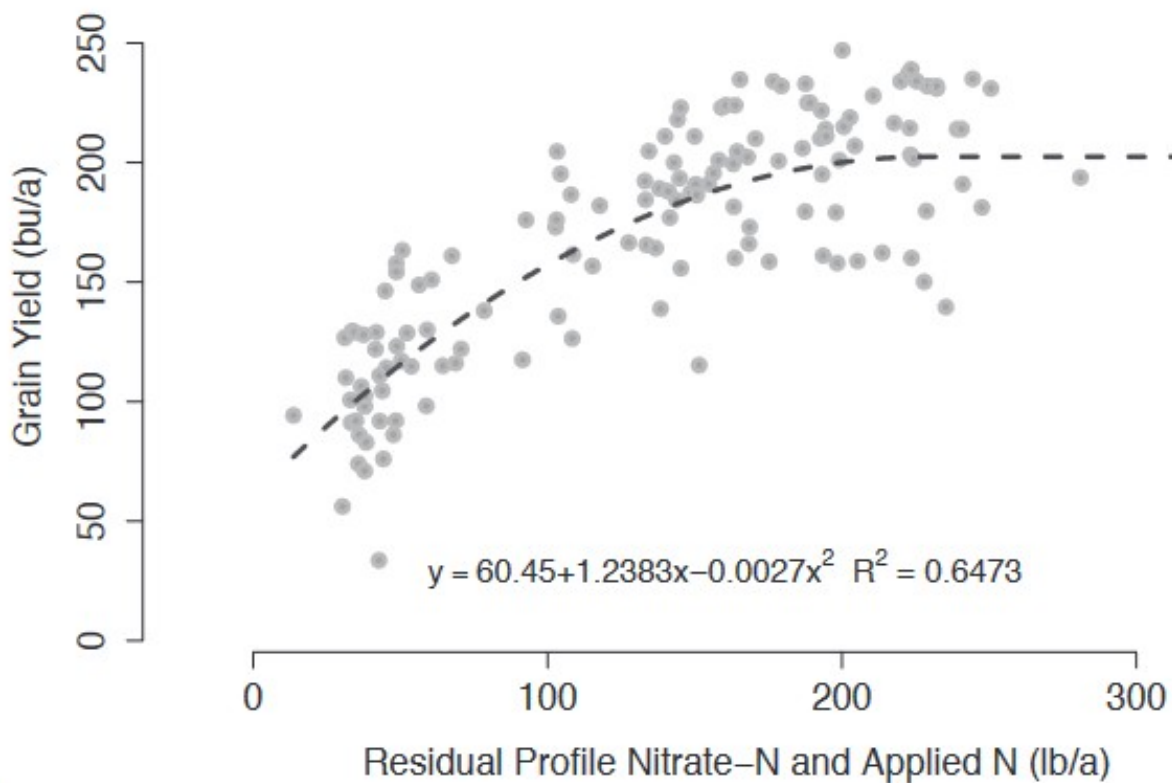
Between the end of February and mid-April, global markets for fertilizer have been on a roller coaster ride. Much of this volatility can be chalked up to market changes in the biggest limiting factor of fertilizer prices: oil. At the end of February, WTI crude oil futures were trading at around \$67. From there, it peaked at \$112 on April 6, largely due to concerns about oil supplies being cut off from the Strait of Hormuz off the coast of Iran. The Strait accounts for a significant amount of the movement of the world's oil supply out of the Middle East. If supplies from there were cut off from the world market, less oil in the world to squabble over means higher prices for everybody. Because oil is a limiting factor in the production of most fertilizers—in other words, you can't make fertilizer unless you have oil—fertilizer prices rose, too. By the beginning of April, anhydrous ammonia popped above \$1,050 per ton, liquid urea above \$800, UAN28 just under \$500, UAN32 above \$550, DAP above \$850, MAP over \$900, and potash just under \$500 (Source: DTN, 2026).

Fortunately for many producers, most fertilizer purchases for the 2026 growing season have already been made. However, for farmers considering additional fertilizer purchases this year for extra applications on summer row crops or starter fertilizers on winter wheat and cool season forages, it's worth taking a second look at the cost-benefit analysis of your fertilizer program. K-State Extension emphasizes the importance of distinguishing between the agronomic and the economic optimum fertilizer rate, which changes based on the cost of fertilizer and how much additional yield you can expect to get out of adding more fertilizer.

However, since the announcement of the two-week ceasefire on April 7, oil prices fell dramatically, bottoming at \$75 per barrel before modestly recovering as negotiations for a long-term conclusion to the conflict continue. Fertilizer prices have also fallen modestly, but because fertilizer is a step further down the line in the supply chain, the shock from the ceasefire news was not as large right away as it was in the oil market. The question now, for those who have remaining fertilizer purchases to make this year: do we pull the trigger now in case prices go back up? Or do we ride out this situation in hopes that prices will fall further?

Hope is a virtue, but it's not always a sound management strategy. The economical way to approach this problem is to look at that key relationship I mentioned earlier: how much value can you expect to get out of adding more fertilizer?

As we know, extra fertilizer does not have the same effect on production when you've already applied a lot as it does when you haven't applied any. That first 100 lbs. of N on corn are going to go a lot farther than the next 100 lbs. of N (as an example). The diagram on the reverse side of this page shows what I mean.



So, the trick is figuring out the point where the current cost of fertilizer is more than the value of yield gain from applying it. If I'm paying \$2/lb. for anhydrous (82-0-0) and \$1/lb. for potash (0-0-60), but I need 1½ lbs. of N and ½ lb. of K to get an additional bushel of \$4 corn, that

comes out to: $\frac{2 \times 1.5}{0.82} + \frac{1 \times 0.5}{.6} = \$4.49/bu.$

At those prices and those rates of turning extra fertilizer into extra yield, I'd be losing \$0.49 on each extra bushel I tried to raise. But if I only needed

1¼ lbs. of N and ¼ lb. of K, that comes out to: $\frac{2 \times 1.25}{0.82} + \frac{1 \times 0.25}{.6} = \$3.47/bu.$

In that case, I'd be gaining \$0.53 on each extra bushel I tried to raise. The lower you are on your total amount of fertilizer applied, the less you need to turn it into extra bushels, but the higher you are on the total amount you plan to apply, the more you need to turn it into extra bushels.

The management strategy in times of high fertilizer prices with uncertain expectations is to plan to buy some of the extra fertilizer you planned to apply, but maybe not all of it all at once. Since for most of us our starter fertilizers are already paid for, check to see if all the extra applications you need to make pencil out at every level of your fertilizer program. If your fertilizer rate or return looks like it's going to taper off at those higher application levels, maybe hold off on those few extra pounds unless markets start moving again in a more profitable direction.

If you have questions about making management decisions in times of market uncertainty, feel free to reach out to me, Luke Byers, your River Valley Extension District Agriculture & Natural Resources Program Manager, at 785-632-5335, or by email at lsbyers@ksu.edu.