

# Efficiency Of Fertilizer Use Is Primary Objective As Prices Surge



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The prices of fertilizer inputs have increased greatly the last couple of years. Fortunately, the prices of commodities have also. With both price increases, the fertilizer recommendations remain the same. However, efficiency of fertilizer use, to maintain high yields, becomes a primary objective at this point.

Below are a few basic points that might help with this.

1. If you have not changed your fertilizer program in the last several years and are relying on post management practices, that seemed to work during previous times, now is the time to rethink what you are doing. It could pay handsomely for you.

2. Soil Test More Often – Soil testing at least every second year will help you know what level of nutrients you have in the soil and better refine your fertilizer needs.

3. Operate in the Medium Soil Test Range for P and K (as per U of Ky, AGR 1 guide) – A soil test of P of 35 to 45 lbs/ac and K of 200 to 250 lbs/ac using Mehlich III extractant means you have enough of these nutrients in the soil to grow a crop this year. Maintenance rates of P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O are all that is needed. When you are above this range, you can stop adding fertilizer until you get down into this range. If you are below this range, the only way to conserve of

fertilizer additions is with the use of row fertilizers

4. Row Fertilizers – When you are in the low range of P or K soil test, the fertilizer can be banded beside the row and improve the efficiency of use. Fertilizer rates can be reduced by 1/3 to 1/2 of that recommended for broadcast treatments.

5. Maintain a Proper pH – The best pH for most crops is between 6.2 and 7. When in this range, fertilizers are used more efficiently. Phosphorus can be as much as 20 to 25 percent more available in this pH range as opposed to a pH in the 5's.

6. Manures are an excellent source of fertilizers and are usually much cheaper than purchased commercial fertilizers. Good distribution and nutrient testing are the keys to the use of manures as fertilizers. They will usually build P levels and maintain K levels when used. The N availability is somewhat unpredictable but good estimates can be made for the conditions under which the manure was used.

7. K fertilizer timing is important on crops when the vegetation is the harvested crop such as silage, hay or straw. The plant will take up more K than is needed for production if it is available for uptake. This is called luxury consumption. Therefore, K fertilizer should be applied only once for 2 crops if the vegetation is removed with the harvest of the first crop such as with double cropped silage, wheat straw before double cropped soybeans. If growing alfalfa, K should be applied after the 1st harvest and again after the 3rd harvest.

8. Nitrogen rates for grain cannot be changed with the present economics. However, sidedressing some of the N on poorly or somewhat poorly drained soils will improve nitrogen efficiency and rates can be reduced by 35 lbs/ac from preplant recommendations. Δ

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