



PROFIT PROTECTION IDEAS

Batch Applications of Phosphorus Can Boost Wheat Profits

BROADCASTING large, single applications of phosphorus (P) can be more profitable over a several-year period than smaller annual additions of seed-placed P.

The figure above used cost-benefit analysis to compare the net present value of return between single broadcast applications and consecutive annual seed-placed P treatments. In this trial, a one-time investment for 160 lb P₂O₅/A gave greater profits than any of the small annual applications over a five-year period.

Banding phosphate with or near the seed often results in greater fertilizer efficiency and crop response than broadcast and incorporated P. However, the agronomic advantages of banding compared to broadcasting are apparent at only low soil test levels or low application rates.

Studies in the northern Great Plains have shown that residual effects of fertil-

izer P can last for several years. One Saskatchewan study found the five-year cumulative grain yield from a single broadcast P application of 160 lb P₂O₅/A was greater than 40 lb P₂O₅/A seed-placed in each of five crop years. Combining a single P broadcast application with annual seed-placed P produced a better yield response than either treatment applied alone. The highest yields required 360 lb P₂O₅/A (160 lb/A broadcast initially and 40 lb/A applied annually) over the five-year period.

Near maximum yields were produced by an initial broadcast application of 80 lb P₂O₅/A plus 20 lb P₂O₅/A applied with the seed each crop year.

Building and maintaining high levels of soil P is a good investment, a capital improvement to the land and a key to higher profits. ■

This message is available on a 3 1/2" × 7 1/2" information card. This is one of a series of publications on Profit Protection Ideas, a service of PPI, 655 Engineering Drive, Suite 110, Norcross, GA 30092-2821. Phone (404) 447-0335.