

Ag engineer: Drop in cost of tile may spur more drainage

CARBONDALE, Ill. — A dramatic drop in the cost of tile means farmers might want to consider draining some of their wet fields.

These days, farmers can put in tile for about 40 to 50 cents a foot and a provision in the 2002 farm bill will allow them to write off much of that expense.

"Even without that, you're looking at about a 6 percent rate of return, but add the tax break into the equation and tile becomes really attractive," University of Illinois agricultural engineer Richard Cooke told farmers at Southern Illinois University's recent annual field day.

"Tile drainage is basically an economic decision," Cooke said. "If the benefits exceed the costs, it makes sense."

Cooke has developed a spreadsheet that can help farmers figure the costs and benefits of tile draining their own farms. It will be available this fall from state extension offices on a CD version of the newly updated "Illinois Drainage Guide."

Benton farmer G. Kelly Robertson, who also is a master's student in plant and soil science at the university, used this spreadsheet to project the rate of return on installing tile in a Saline County field used in drainage research.

"It allows you to put in data for your own farm, and you can change whatever factors you want, so you can do the calculations on paper before you do them in the field," Robertson said. "I'm a bit of a pessimist, so I tried to go for the worst-case scenario for everything (when feeding in the numbers)."

Robertson figured it would cost \$505 per acre to install the tile and projected a \$40-per-acre increase in income because of higher yields.

Taking into account such factors as the useful life of the tile, depreciation and interest and tax rates, he calculated an investment in drainage would produce a 5.76 percent return in this particular situation.

Based on those figures, he decided to install tile in a hilly field of claypan soil that included part of a former long-wall mine.

"Before the tile went in, it was a wet spot," he said. "After the tile went in, there was a yield."

He left a nearby field with the same slope, same kind of soil and same fertility record alone, just to see what kind of difference tile would make. The tiled field had its first test in 2002 – a drought year.

"All I heard was that the tiled ground would dry out, the crop would burn up, and we wouldn't make anything," he recalled. "But that didn't happen. The tiled ground yielded more."

Significantly more – it produced 85.71 bushels per acre, compared with 57.34 bushels from the field left alone. The next year, with plenty of rain, the tiled field yielded 168.8 bushels per acre, while the other one produced only 119.3 bushels.

"The thing that surprised us was that the yield pattern didn't change from a bad year to a high-yielding year," Robertson said.

Robertson said he thinks getting into the tiled field early accounted for the yield difference that second year.

"We planted in April, where the other field was planted in May because it was just too wet to get in there before," he said.

Robertson, who also is a certified professional agronomist and a certified crop advisor, has become a believer when it comes to tile.

"In two years, that yield increase has paid back a third of the cost of the tile," he said.

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