

No Till Practices, Better Management Equal Significant Fuel Savings

One of the hottest conversation topics around downtown coffee shop tables today is the high price of fuel. With gas nearing \$4 a gallon and diesel at \$4.15 a shot, the price of fuel is clearly impacting our lives.

That impact is especially noticeable on our farms where thousands of gallons of fuel are needed annually by each producer to plant, grow, tend and harvest a crop. As we look at ways to reduce our consumption of fuel on the farm, two ideas come to mind - no till cropping practices and better overall management.

No till cropping systems have a proven track record of improving soil structure, saving water, preventing soil erosion and increasing the biological diversity in the soil. No till practices are also a good means to reduce fuel consumption. Since no till eliminates a number tillage functions the savings on diesel fuel has been conservatively estimated at two gallons of diesel per acre for the year. So, in fuel savings alone, no till practices are a really good idea.

Ammonia fertilizer (basic N fertilizer) is made with air and natural gas. A savings of two gallons of diesel a year equates to roughly 10 lbs. of nitrogen. Information on page 67 of the Wardguide on the www.wardlab.com website, indicates 100 lbs. of nitrogen equals 19 gallons of fuel.

Producers can feel good that the fuel savings achieved through no till practices are significant for both the environment and their own bottom line. But additional, and maybe even more significant, fuel savings can be achieved through better nitrogen management.

Timely, accurate soil sampling to determine residual nitrogen in the root zone, estimating the available nitrogen from crop stubble and cover crops through no till practices, careful monitoring of applications, and being diligent in monitoring your overall nitrogen needs are all ways to squeeze a few extra gallons of savings through better management.

Therefore, farmers could consider reducing the nitrogen they apply by 10 lbs. per acre. A small reduction in nitrogen will not impact yields significantly, but, as we pointed out earlier, equates to a saving equivalent to two gallons of diesel per acre.

Better water management is another means to slow down the flow of diesel fuel on your farm. A typical center pivot system covers 130 acres and makes a revolution every 84 hours. If three gallons of diesel fuel is used every hour to pump water to the pivot, then each revolution equates to 252 gallons of fuel for every 130 acres or 1.9 gallons per acre per revolution. Better management of your irrigation resources by a reduction of one inch of water per year will not impact yields but the savings of diesel fuel will be dramatic.

In summary, 10 lbs less nitrogen on your field and an inch less irrigation does not seem like a lot and certainly will not impact your yields at all. But coupled with no till practices, those two management decisions could provide fuel savings of six gallons or more a year on every acre you farm. And, savings of that magnitude will really give you something to talk about at the coffee shop.