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## THE LEADING EDGE

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## A PUBLICATION DEDICATED TO MAXIMIZING YIELD POTENTIAL

## Double the Power: Residue Management on Fertilizer Applications

The agriculture industry progresses extremely quickly, and endless decisions face growers each year. It's not enough to keep up-to-date on the newest processes. A comprehensive cost/benefit analysis including equipment requirements, impact on the soil, labor capabilities, and many other factors ultimately determines the right path for each unique operation.

Through all the variables, a few things, such as concern for the environment and maximizing time spent in the field, will always be vital. As farmers have made the move to no-till or strip-till, equipment needs have adapted. This has lead to the introduction of multipurpose tools that accomplish fertilizer application and residue management in one pass through the field.



Applying dry fertilizer with Maverick strip till units

Reduced-tillage systems are better for the environment. They have benefits in addition to soil conservation, one of which is a warmer, drier planting zone. Strip-till creates a loose, mellow soil, which encourages rapid root development and allows quicker contact with bands of nutrients to jump-start yield potential. A balance of untouched residue helps retain soil moisture. No-till offers the same benefits of residue coverage and further reduction in required labor.

It was once difficult to match conventional tillage yields using reduced tillage. When there is excess residue on the surface, crops may not be able to effectively use nutrients. For this The Leading Edge - Issue 43 02/15/2007 11:47 AM

reason, in no-till and strip-till operations, fertilizer placement and residue management are brought to the forefront.

Depending on desired tillage and soil type, a coulter with a residue manager may be beneficial. However, in most cases, a residue manager alone will perform the right amount of tillage.

Precision fertilizer placement tools coupled with residue managers have helped to drive yields to new highs. Moving a strip of residue where the seed is to be placed will result in soil that warms more quickly, speeding emergence. Research has shown that corn yields following seasons of high-residue crops such as corn, small grains, or hay increase as much as 10 percent when a 6-inch wide strip of corn residue is cleared from the row area.

In many planting operations, a residue-cutting coulter opens the seed trench ahead of the double disc opener. Floating residue managers, like the Titan $^{\text{TM}}$  from Yetter Manufacturing, are the best selection for this application because they easily follow soil contour.



2995 Series Fertilizer on planter

Mounted ahead of the residue manager, a fertilizer coulter can be used to inject a band of fertilizer close to the seed. Through independent depth adjustment, fertilizer can be applied at a different depth level from the seed, ensuring precision placement, the key to achieve optimal yields and healthier plants.

Most planting operations use "2x2" starter fertilizer placement, meaning 2 inches off the row and 2 inches below the seed. But no two farming operations are the same, and no one fertilizer opener style fits all, so make sure to complete a soil analysis and consider your operation's capabilities before making a decision. There are many options available to growers. Yetter offers several TruePlacement<sup>TM</sup> fertilizer opener models that are capable of applying fertilizer in the location best suited for uptake by the growing plants.

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Fall fertilizer
application is not
always appropriate
and should be done
only on soils with low
potential for
leeching. Nitrogen
must be applied
before soil loses
moisture but after
soil temperatures
have fallen below 50
degrees.

Doubling up on fertilizer placement and residue management can be a huge time saver, especially in the fall when time for producers is scarce. The ideal tools for fall strip-till will work together to build consistent berms and move just the right amount of residue without disturbing soil. Fertilizer should be placed in the root zone, ready and waiting for spring planting. Tools like Yetter Manufacturing's Generation II Maverick Opener™ and residue manager accomplishes this goal and make maximum return-on-investment a reality.

Residue management in no-till operations is a challenge, especially in corn-on-corn operations. There are residue managers on the market specifically engineered to handle the toughest residue, some are designed for use in planting applications and others and others for use on fertilizer application tools. Sharktooth® Wheels from Yetter Manufacturing tackle the job well, even in narrow rows.

Surface residue in no-till also makes broadcasting nitrogen and other fertilizers ineffective. The best system for fertilizer application in no-till is injection below the residue layer in the soil. Thin profile knives are the best equipment option to minimize soil disturbance. While most research supports applying knife-injected fertilizer every row, some studies have shown alternate rows to be just as effective. For further savings and environmental benefits, explore this option.



Fall Application

In no-till, strip-till, or other kinds of reduced tillage systems, an investment in equipment that is capable of handling residue

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management on fertilizer application will increase efficiency, benefit the environment, and ultimately boost yields.

Visit <u>www.yetterco.com</u> to review past issues of The Leading Edge and Yetter products that maximize your yield potential.

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