THE LEADING EDGE

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A PUBLICATION DEDICATED TO MAXIMIZING YIELD POTENTIAL

Technology and Precision Equipment Combine to Maximize Sidedressing Potential

Side-dressing is a proven method of fertilizer application that can give your crops—corn in particular—an extra boost. This process of placing fertilizer directly on target to intercept emerging roots and provides nutrients through the growth life of the plant. Side dressing can replace nitrogen lost to leaching. It also allows you to apply essential fertilizer without causing damage or burning of the roots or leaves.



Side dress coulter bar



Fertilizer coulters on Pull-type Application

Determining just how much additional application is necessary and what tools will best apply it is a never-ending guessing game in which cost, quality, and environmental concerns are key players. Because of variations in the weather and soil composition throughout fields, applying the same amount of nitrogen year after year is not the most efficient, cost-effective, or environmentally conscious option.

For instance, warm and wet conditions from planting to midseason lead to improved N mineralization, and therefore more nutrients become available to growing crops. Moderate rainfall also increases N availability. However, cool and dry conditions or extremely heavy rainfall after planting can result in very low N availability from the environment.

Side-dressing applications should be timed for maximum uptake by the plants. But fields still exhibit differences, even soils just a few feet apart, in the amount of nitrogen needed to maximize yield without going over board. Emerging technology combined with nitrogen-rich test strips are providing researchers with a clear idea of how producers can end the nitrogen application guessing game.

New sensors are coming on the market that are capable of determining what amount of nitrogen is necessary to maximize yield and minimize cost and impact on the environment. The sensors use light reflected off the crop to determine the amount of nitrogen necessary to bring the tested area up to the level of the lowest-rate strip sufficient in nitrogen. On applicator mounted models, the sensor communicates with software that adjusts the amount of nitrogen applied during real-time application. This accurate data will make money by giving producers the confidence to cut rates where indicated.

Determining the most effective amount of fertilizer to side-dress is only half the battle. The best results are possible only if equipment capable of precision placement is utilized. Yetter Manufacturing Company offers toolbars, fertilizer application attachments, and high clearance sprayers equipped for side-dressing. When choosing such equipment for your operation, it is imperative to look for well-built models that will endure for many seasons to come.

When selecting a fertilizer toolbar, look for models that are constructed of steel tubing and heavy-duty hinges to hydraulically fold for narrow transport width. The toolbar should also have the ability to lock into a positive extended position with hydraulic activated locking mechanisms. Yetter Manufacturing Company's 3600 Series Fertilizer Toolbar for John Deere 4710/4720 sprayers is one high-speed option. It can take on the task of side-dressing as soon as plants emerge and continue well into the growing season.



3600 Series Fertilizer Bar for JD 4710/4720 sprayers

A key element in fertilizer application attachments is adjustability. For example, coulters should be fully and easily adjustable for maximum down pressure with minimal soil disturbance. The coulter and adjustable spring should work in tandem to place fertilizer next to the seedbed, and the rear knife should be horizontally adjustable against the blade to prevent residue build-up.

Stability is probably the most important factor in pinpoint placement. One good example of equipment that provides steadiness is the parallel linkage system from Yetter. Two parallel arms fix the position of the fertilizer knife relative to the field surface. The linkage flexes when field contour changes, so the knife stays in the soil. A spring cushions the assembly to prevent damage from rocks and other obstructions.

Yetter has also recently introduced an injection kit for coulters to enhance their application tools. The injector has an exclusive design that allows the tip to pivot and aim a fertilizer stream directly at the trench cut by the coulter. Pinpoint placement through an aimed stream eliminates the chance of splashing and fertilizer waste.

Other options to supply a sidedress applicator are 1000 gallon, 1600 gallon and 2000 gallon All Steer high-capacity fertilizer carts. Another option is to mount a sidedress toolbar directly to the All Steer to use the weight of the tank for positive opener penetration. These options provide an excellent way to side-dress because there is no need to continually stop for refills. When selecting a high-



2000 Series All Steer Fertilizer Toolbar

capacity cart, be sure that it uses structured steel tubing as the foundation for the saddle tank. This feature provides a strong mounting platform, which evenly distributes stress loads on the tank. It is also wise to choose a model that has rear tires that continually track the front tires, resulting in less compaction and downed crops a controlled traffic pattern, and a tighter turning radius.

Combining N sensors with the proper side-dressing equipment will

result in the most efficient use of nitrogen for producers. Yields will be maximized without the expense of unneeded fertilizer and without negative impact on the environment.



Maverick[™] applying anhydrous

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