

Spreaders

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Pendulum-action Spreaders

Rotary broadcast spreaders offer many advantages for turf professionals, but they have some disadvantages including pattern skewing and the need to develop pattern settings for each product to center the pattern. Pendulum-action spreaders overcome those problems.

What Are Pendulum-action Spreaders?

Pendulum-action spreaders do not have a rotating impeller. They have a steel or plastic tube that sticks out horizontally behind the spreader and oscillates from side to side in a horizontal plane (Figures 1 & 2). Fertilizer is metered into the front of the tube using conventional metering ports, and it is then slung out the end of the tube as the tube oscillates. A deflector on the end of the tube helps scatter the granules. Pendulum-action spreaders were developed in The Netherlands and are now widely imported (and widely copied) in the United States.

Advantages of Pendulum-action Spreaders

Whereas rotary spreaders tend to skew the pattern to one side or the other and change pattern skewing with different products, pendulum-action spreaders deliver a pattern that is generally balanced from side to side with minimal skewing. Many tests by the LSU AgCenter have shown that the pattern is generally skewed no more than 5 percent (the pattern will be within 55 percent left/45 percent right to 45 percent left/55 percent right). Often the skewing is less than 2 percent. This is far better than uncorrected rotary spreader patterns.

Furthermore, the patterns from a pendulum spreader tend to be symmetrical as well as numerically balanced, making it easier to find a swath width that will provide good uniformity. Swath width will vary with product, so pattern testing is still needed for each product, but the testing is much easier since it is not necessary to do repetitive testing to find a centered pattern.

What Else Will It Do?

Some pendulum spreaders allow you to reduce the arc of oscillation, allowing you to narrow the pattern if desired. An interesting option with pendulum spreaders is the ability to apply bands of fertilizer. If you use a tube without a deflector on the end, the fertilizer (or other granules) will be thrown in a discrete band on each side of the spreader with none in the center of the pattern. By varying tube length, PTO speed and spout height, the spacing between the bands can be varied from about 20 feet down to less than 10 feet. This banding is handy for treating rows of trees or shrubs.

Selecting a Pendulum Spreader

There are many brands of pendulum-action spreaders on the market, but most are manufactured by only a few companies. Many are imported from The Netherlands or Italy. Most do a decent job of distributing granules, but there is a difference in rate control on different brands. The best machines incorporate a turnbuckle-type device that allows fine setting increments, even at low rates. Some other brands have a series of holes through which a pin is inserted to form a stop for the on-off lever. These units typically have large setting increments, especially at low settings. If, for instance, you want to apply 100 pounds an acre, you might find that one setting delivers 50 pounds an acre and the next setting delivers 150. The turnbuckle system gives much finer increments and is strongly recommended.

In summary, a pendulum-action spreader is usually the best choice for a tractor-mounted spreader for turfgrass. It will do everything a rotary spreader will do and generally do it better. Unfortunately, walk-behind pendulum-action spreaders are not available.

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Figure 1. Pendulum-action spreader.



Figure 2. Spout on pendulum-action spreader.