Calibrating a Fertilizer Spreader

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Operate the tractor at the speed and rpms that it will be used in the field.

Select a setting for the spreader.

Run the tractor and spreader and adjust the spreader setting until the desired band width is achieved.

Empty the hopper.

Record the application band width (in feet). Ex. 4 ‘

Measure a distance (in feet). 100 feet is an easy number to work with.

Mark the two ends with easily visible flags.

Put a known weight of fertilizer in to the hopper. Five pounds is a good amount to start with.

Run at the speed and hopper setting determined in the above steps until the spreader empties. Make multiple passes if necessary. Record the total length traveled.

Repeat 2 more times.

Average the length. Ex. 118’

Take the average length and multiply by the band width to calculate the square feet to which the fertilizer was applied. Ex. 472ft^2

Take this area and create a ration with the square feet in an acre (43,560 ft^2) and solve for the pounds of fertilizer being applied on a per acre basis.

$\frac{472\ ft^2}{43{,}560 ft^2} = \frac{5\ pounds}{X\ pounds}$

$472X = 5(43{,}560)$

X=462 pounds of fertilizer applied per acre

Now multiply by the percent nitrogen in the analysis. For example ammonium nitrate will be 34-0-0, which is 34% nitrogen.

462(.34) = 157.1 pounds of actual nitrogen per acre

The application rate at these settings is 157 pounds of actual nitrogen per acre.

Use multiple passes to increase the rate of application. This will also increase uniformity. Ex. To apply 300 pounds of actual nitrogen per acre, use two passes.

Supplies:

Scale

Measuring wheel or tape

Container to weigh in

Flags

Paper

Pencil

Calculator