

# Spreader Calibration

## Spreader calibration is simplified using the LESCO Professional Granular Applicator Calibration Kit LESCO No. 009952.

Two items must be considered when calibrating a spreader. The first is the distribution pattern of the spreader. That is, the pattern the product makes as it strikes the ground after being thrown out by the spreader's impeller. There are many factors which affect the distribution pattern of a rotary spreader and some of them relate directly to the product. For this reason, we recommend that the spreader be calibrated separately for every product to be applied. Spreader calibration should be checked at least once a month, or more often when the spreader is used frequently.

The second item is the product application rate, that is the amount of product applied per thousand square feet. This is important because over-application can be costly and may cause plant injury, while under-application will reduce the effectiveness of the product.

### TO CALIBRATE A SPREADER, FOLLOW THESE STEPS:

Check the spreader discharge holes with the operating lever in the closed position. If the discharge holes are not fully closed, thread the upper jam nut on the operating leverrod further up the rod. Tighten the lower lock nut and recheck. Repeat this procedure until the holes are fully closed.

### HOW TO ACHIEVE A UNIFORM DISTRIBUTION PATTERN:

The accurate method for checking pattern uniformity is to lay out shallow boxes or pans in a row on a line perpendicular to the direction of spreader travel. Eleven boxes or pans, two inches high placed on one-foot centers will provide accurate calibration. To conduct the test, begin with the pattern slide completely open and set the rate control arm at the suggested approximate setting. Make three passes over the boxes, pushing the spreader in the same direction each time. The product caught in each box is then evaluated to determine the distribution pattern. Weighing the product in each box is the most accurate, but a simpler method is to pour the contents of each box into a separate small vial or bottle. Then set the eleven vials or bottles side-by-side in order. This makes the pattern variation quite visible.

To reduce the amount of discharge to the right side (operator's right) the pattern slide should be partially closed and the test repeated until the distribution pattern is uniform.

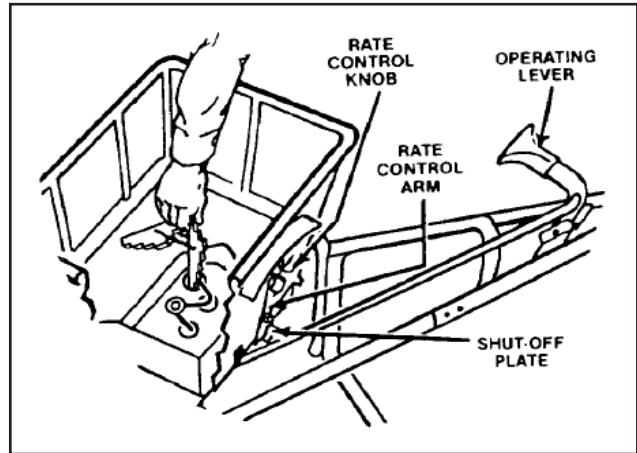
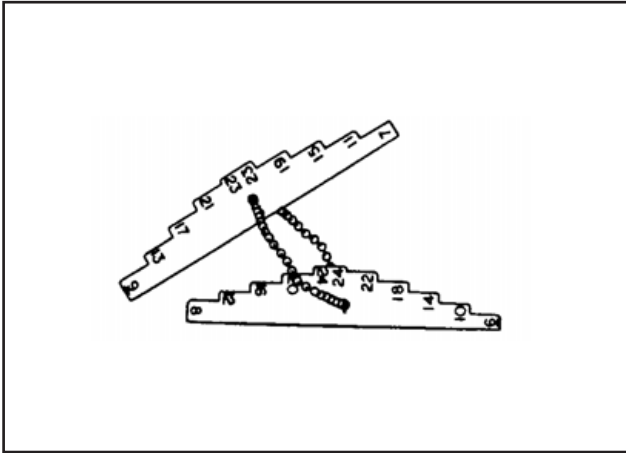
### TO ACHIEVE THE CORRECT PRODUCT APPLICATION RATE:

The approximate spreader settings printed on any product label should only be used as the initial setting for calibration. Set the rate control arm at this approximate setting. Using the collection boxes or pans, make a single pass over them to determine the effective pattern width. The effective pattern width is twice (2x) the distance to the point where the rate drops to one-half the average rate at the center.

*Example: If the product in the vials from the center boxes averages two inches in depth, count out to the vial which has one inch of product. If this is the fifth vial from the center and the boxes were on one-foot centers, the effective pattern width is ten feet (2x5ft.).*

Knowing the effective pattern width (ten feet), measure out a line a distance to equal 1,000 sq.ft. (10ft. x 100ft. = 1,000 sq. ft.). Weigh 20 lbs. of product and place it in the spreader hopper and spread it over the distance necessary to equal 1,000 sq.ft. (100ft.). Then weigh the product left in the hopper and subtract this amount from the amount with which you started. The result is the application rate for this product in pounds per 1,000 sq. ft. that your spreader is currently adjusted to disperse. Adjust the rate control arm up or down as needed and repeat this procedure until the correct application rate is achieved.

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## TO USE THE LESCO CALIBRATION GAUGES

The LESCO Calibration Gauges provide a series of "steps", numbered in 1/32-inch increments, that will allow you to "fine-tune" the LESCO spreader. Once you have calibrated your LESCO rotary spreader for the product chosen, open the operating lever and insert the calibration gauges until you determine which step fits tightly into one of the open holes in the hopper bottom. Record that step number for future reference when using that product. You may choose to set other LESCO rotary spreaders for application of the same product by adjusting the shutoff plate to that calibration gauge step. This will provide consistent settings for all of your LESCO spreaders.

To recalibrate your LESCO rotary spreader after a period of use, adjust the rate control arm to the "24" position. Open the operating lever and insert the even-numbered LESCO Calibration Gauge into one of the open holes in the hopper bottom. Close the operating lever and let the shutoff plate on the underside of the hopper make contact with the number 10 step on the LESCO Calibration Gauge. Move the rate control arm back toward the "6" position until the bottom of the arm makes contact with the shutoff plate. If your spreader is properly adjusted, the top of the rate control arm should be at setting "10". To correct variances, remove the rate control arm, place the bottom of the arm (up to the bolthole) in a vise, and bend either to the right or the left.

## SPREADER TIPS:

1. Always push the spreader; do not pull.
2. Push the spreader at a consistent speed (approximately 3mph is recommended).
3. Always close the operating lever before filling the hopper.
4. Be sure the screen is in place to prevent lumps or paper scraps from plugging the holes in the hopper bottom.
5. Always start walking forward before opening the operating lever; close the operating lever before forward motion is stopped.
6. Hold the handle at a height that will keep the impeller level.
7. Empty the spreader after each use. Wash the spreader thoroughly and allow it to dry. Keep the impeller clean.
8. Lubricate all moving parts. Apply grease to the two grease fittings in the axle supports.