

LESCO SPREADER CALIBRATION RECOMMENDATIONS

Jim Johnson
LESCO, INC.
Mundelein, IL

Two aspects of product application must be considered when calibrating any spreader. First, is the product application rate, or i.e., the amount of product that is to be applied per thousand square feet. The application rate is particularly important because over application can be costly and may cause plant injury, and under application may substantially reduce the effectiveness of the product.

Second, and of equal importance is the distribution pattern of the spreader. The pattern of a rotary spreader is dependent on impeller characteristics (height, angle, speed, shape, roughness), ground speed, drop point of the product on the impeller, product density and shape, and environmental factors (temperature and humidity). The operator does not have control of all of these factors, but we will discuss those aspects of spreader operation that the operator must consider for proper spreader calibration.

LABEL SETTINGS on any product should only be used as the initial setting for trial runs, by the operator, prior to large scale use of the spreader. Calibration should be checked periodically, at least once a month or more often when the spreader is used frequently. The operator may follow these steps for correct spreader calibration.

- A. Adjust "pattern slide" to provide a uniform product distribution across the full pattern. A quick pattern check can be made by operating the spreader over a paved area and observing the pattern. A more accurate method is to lay out shallow boxes or pans in a row on a line perpendicular to the direction of spreader travel. Boxes 2" high placed on one foot centers work well. To conduct the test begin with the "pattern slide" completely open. Close the operating lever and set the rate adjustment at "S". Make three passes over the boxes operating in the same direction each time. The material caught in each box may be evaluated (weighing is most accurate method) to determine uniformity. An easy method is to pour the contents of each box into a small vial or bottle setting them side by side in order. The pattern variation, using this method, is quite visible. To reduce the amount of discharge to the right hand side (operator's right), it may be necessary to completely close the "pattern slide" to provide a uniform pattern.
- B. Determine application rate adjustment as follows:
 1. Set rate adjustment at approximate setting.
 2. Make a trial run to determine the effective width of the pattern using the collection boxes. The effective pattern width is twice (2 x) the distance out to the point where the rate drops to one-half the average rate at the center. Example: If the material in the vials in the center boxes average two inches in depth, count out to the vial which has one inch of material. If this is the 5th vial from the center (boxes were on one foot centers) the effective pattern width is 10' (5 x 2).

3. Now, knowing the effective pattern width (10') measure out a lineal distance to equal 1,000 sq. ft. ($100 \times 10' = 1000$).

4. Weight out some of the product (20#), empty it into the spreader and have the operator spread the product over the distance (see number 3) necessary to equal 1,000 sq. ft. and then weigh the product again to determine the actual rate of delivery. Adjust the rate adjustment up or down as needed and repeat the process until the correct rate of delivery is achieved.

C. Basic Do's and Don'ts:

1. Always push the spreader; do not pull.
2. Push the spreader at a consistent speed (approx. 3 mph recommended).
3. Always close operating lever before filling hopper.
4. Be sure screen is in place.
5. Always start forward before opening ports; close ports before forward motion is stopped.
6. Hold handle at a height that will keep the impeller level.
7. Empty spreader after each use. Wash spreader thoroughly and allow to dry. Keep impeller blades clean.
8. Lubricate all moving parts.