



SPREADER CALIBRATION TIPS

Calibration is essential to obtain maximum accuracy of the spreader. The chart supplied is a guide only and the material being supplied will vary from supplier to supplier.

TO CALIBRATE:

- Fill hopper one half full
- Adjust spout height to 30"
- Run at 540 PTO speed ***Make sure PTO shaft has been sized to the tractor and cut if necessary!**
- Open & close metering plates to determine spread width for broadcasting. A flat smooth area is best to determine this edge. Measure from the where the last granule is found on one side, to the center of the spreader. Use that distance as the "Spread Width" in the formula. Spread width will vary for each material according to it's density.
- Remove Spout
- Attach a catch bag or container to spread unit
- Set unit at proper height
- Adjust PTO speed to 540 RPM
- Collect material in sack for one minute
- Weigh the material and compare to chart
- It may be necessary to reset adjusting rod position

The tractor ground speed is very important to the accuracy of the application rate.

This should be checked and determined to be correct.

$$\text{MPH} = \frac{\text{Distance traveled in 20 seconds}}{30}$$



WHEN THE MACHINE IS DELIVERED

and ready for start off, it is essential that the unit is fitted to the tractor which has had its PTO checked for speed, i.e. 540 at the recommended tractor engine speed. The unit must be fitted to the tractor linkage and be level from side to side and also front and back. The spout must be 30" above the ground or crop.

OTHER USEFUL FORMULAS:

The formulas can be used when application rates are less than 20 lbs/ acre.

TO DETERMINE CALIBRATION LBS/MIN

$$\frac{\text{LBS/ACRE} \times \text{MPH} \times \text{SPREAD WIDTH}}{495} = \text{LBS/MIN}$$

EXAMPLE: APPLICATION RATE 250 LBS/ACRE

DRIVING SPEED 5 MPH

SPREAD WIDTH 42 FT.

$$\frac{250 \times 5 \times 42}{495} = 106 \text{ LBS/MIN}$$

TO DETERMINE LBS PER ACRE

$$\frac{\text{LBS/MIN} \times 495}{\text{SPREAD WIDTH} \times \text{MPH}} = \text{LBS PER ACRE}$$

EXAMPLE: CALIBRATION 88 LBS/MIN

SPREAD WIDTH 42 FT.

DRIVING SPEED 5 MPH

$$\frac{88 \times 495}{42 \times 5} = 207 \text{ LBS/ACRE}$$

FRUIT & XMAS TREE BANDING

$$\frac{\text{LBS/MIN (calibration)} \times 495 \text{ (constant)}}{\text{SPREAD WIDTH IN FT.} \times \text{MPH}} = \text{LBS/ACRE (Total of Both Bands)}$$



The regulation rod determines the opening of the dosing plate and can be changed by turning the adjusting nut.

COMMON METRIC CONVERSIONS:

1 Meter = 3.29 Feet

1 CM= .394 Inch

1 KG = 2.2 lbs.

1 Liter = .0357 Cu. Ft.

1 Liter = Approximately 2.38 lbs. dry fertilizer

1 Hectare = 2.47 Acres

1 Acre= .4047 Hectare

Capacity in pounds is based on dry fertilizer weight of approximately 67 lbs./cu. ft.



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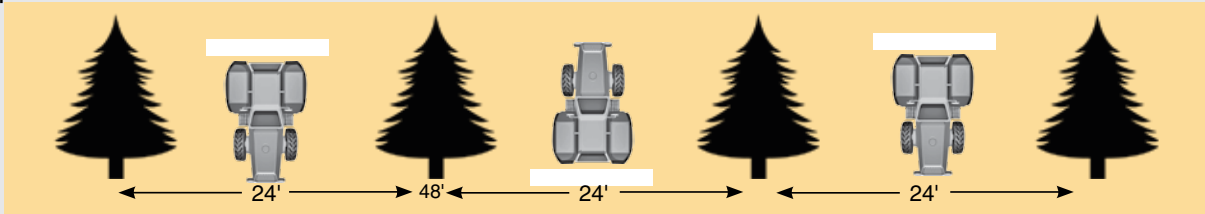
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CALIBRATION FOR BANDING

1. Determining spread width:
 - a. Row spacing and band width with one pass are the factors that determine what spread width figure to use in the formula for calculating lbs./minute
 - b. Example: If rows are on 24' spacing and the band width is adequate to apply an equal amount of fertilizer on the row then only one pass is required. That means every other row is used, and the spread width entered will be 48'.



- c. If band width is not wide enough to cover a row in one pass then every row is traveled and effective spread width entered will be 24'



2. Adjusting band width:
 - a. Several adjustments can be made to change the width of the band.
 1. Spreader height on the 3 point (Raise or lower)
 2. Spreader angle (lengthen or shorten top link)
 3. PTO speed
 4. Spread angle adjustment on the spreader base unit. (use adjustment wrench to change the arc of the spout- machines are shipped with maximum arc setting)
 5. Some users have experimented with making the end of the spout larger by grinding very small amounts off the end. This is **NOT RECOMMENDED**, but if it works for the application, it is another way to make the band wider.



Spreader height



Spout angle



Spout arc adjustment

250# per acre is the desired rate of application. Rows are on 24' centers. Band width requires a pass down every row

FORMULA TO DETERMINE POUNDS PER MINUTE:

$$\frac{\text{Lbs/acre} \times \text{MPH} \times \text{Spread Width}}{495} = \text{lbs/minute to catch} \quad \frac{250 \times 5\text{mph} \times 24'}{495} = 30000 = 60.6 \text{ lbs/minute}$$

Set the metering rod at 33 or 34 to start with. Adjust until closest to 60.6 lbs per minute are caught.

EXAMPLES: