No Math Calibration Method for Boom Sprayers with Evenly Spaced Nozzles

1. For a broadcast spray boom with nozzles that are evenly spaced - determine nozzle spacing in inches.
2. Use table below to determine distance to travel for a timed run based on nozzle spacing.

Nozzle spacing (inches)	Distance in feet
40	102
38	107
36	113
34	120
32	127
30	136
28	146
26	157
24	170
22	185
20	204
18	227
16	255
14	291

3. Set throttle and operating equipment including spray pressure for spraying and drive the required distance– It is not necessary to spray during this timed run.

   Note the seconds required to drive the distance.

4. Collect spray from a single nozzle in the number of seconds noted in step 3 above.

   Gallons per acre (GPA) = ounces collected

   *Check all nozzles to confirm the same output

No Math Method for Calibrating Backpack and Pump-up Sprayers

1. Measure off an area that is exactly: 18.5 ft x 18.5 ft (approximately 1/128 of an acre)
2. Spray test area uniformly with water and note the number seconds required.
3. Spray into bucket for the same number of seconds maintaining spray pressure. Determine the amount collected in ounces.

Ounces collected = Gallons per acre

Calibrating a Boomless Sprayer

Step 1 - Determine the effective spray width – approximately 80% of the wetted spray width.

Example—if wetted spray width area is 30 feet — 30 feet x 80% = 24 feet would be the effective spray width

Step 2 - Using the effective spray width that was determined in Step 1, find the calibration distance needed to travel from Table 1.

Step 3 - Measure and mark calibration distance obtained from the Table 1 for the corresponding spray width.

Table 1. Calibration distances for corresponding spray widths.

Effective Swath Width (ft)	Calibration Distance (ft)
40	85
36	94
30	113
28	122
24	142
20	170
18	189
16	213
14	243
12	284
10	340
8	425

(swath width x spray distance is approximately 3,400 ft^2 total area)

Step 4 - Determine the number of seconds it takes to travel the calibration distance at the speed that you will be spraying. Be sure machinery is traveling at the spraying speed for the full length of the calibration distance. ***Note engine RPM and gear and seconds needed for travel distance.***

Step 5 - With the sprayer parked and operating at same throttle setting/engine R.P.M. as used in step 4:

Collect spray from cluster nozzles or single nozzle outlet for the number of seconds required to travel the calibration distance. ***Note: Machine must be operated at same RPM used for calibration run.***

Step 6 - Measure the amount of liquid collected in fluid ounces.

Step 7 - Divide the total number of fluid ounces by 10 to obtain gallons per acre applied.

For example: if you collect 140 ounces, the sprayer will apply 14 gallons per acre.

For a boomless sprayer calibration - Ounces collected / 10 = gallons per acre

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