



A Simple Method To Calibrate Sprayers

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Before you can accurately apply the right amount of herbicide to a field, you have to know how much spray mix is being applied to each acre. This knowledge will help you determine how many acres you can cover with one tank and how much herbicide to add to each tank. Sprayer calibration is not difficult, but it can be challenging if you have never seen it done before. Here are simple methods to calibrate a boom and boomless sprayer.

BOOM SPRAYER

1. Select a course length based on nozzle spacing (from chart below)

Nozzle spacing (inches)	20	22	24	26	28	30	32	34	36	38
Course length (feet)	204	185	170	157	146	136	127	120	113	107

2. Measure out course in field to be sprayed.

3. Measure time (in seconds) to drive course. Use a comfortable gear and speed. Take the average of three trips. Make note of engine speed (rpm).

4. Park tractor with engine running at same rpm and catch the output from one nozzle for the time found in Step 3.

5. Measure output from one nozzle in ounces. This measurement will tell you the sprayer output in gallons per acre.

6. Determine acres that can be covered with one tank. This will be tank volume (gallons) divided by sprayer output (gallons from Step 5).

7. Multiply acres from Step 6 by desired herbicide rate. This result will give the amount of herbicide to add to the full tank.

Boom sprayer example: You would like to spray 2 pints 2,4-D per acre. How much herbicide do you need to add to the tank if you have a sprayer that holds 100 gallons with nozzles spaced 20 inches apart?

Answer:

- Measure a course 204 feet in length.
- You drive the course three times and find it took an average 46 seconds to drive the 204 feet.
- Park the tractor and catch the spray from one nozzle for 46 seconds, which you find measures 20 ounces. You now know you are applying 20 gallons per acre.
- The sprayer holds 100 gallons, so $100 \text{ gallons} \div 20 \text{ gal/acre} = 5$ acres that can be covered with each tank.
- 2 pints per acre 2,4-D x 5 acres = 10 pints 2,4-D needs to be added to each tank.

BOOMLESS SPRAYER

1. Select a course length based on spray swath width (from chart below)

Spray width (feet)	30	32	34	36	38	40	42	44
Course length (feet)	182	171	161	152	144	137	130	124

**If your sprayer's spray width is not listed, divide 5,445 by your spray width to get travel distance.*

2. Measure out course in field to be sprayed.
3. Measure time to drive course. Use a comfortable gear and speed. Take the average of three trips. Make note of engine speed (rpm).
4. Park tractor with engine running at same rpm, put garbage bag around nozzle and catch the output for the time found in Step 3.
5. Measure in pints. This measurement will equal sprayer output in gallons per acre.
6. Determine acres that can be covered with the tank. This will be tank volume (gallons) divided by sprayer output (gallons from Step 5).
7. Multiply acres from Step 6 by the desired herbicide rate. This total will give the amount of herbicide to add to full tank.

Boomless sprayer example: You would like to spray 2 pints 2,4-D per acre. How much herbicide do you need to add to the tank if you have a sprayer that holds 100 gallons with a spray width of 34 feet?

Answer:

- Measure a course 161 feet in length.
- You drive the course three times and average 41 seconds to drive the 161 feet.
- Park the tractor and catch the spray from the nozzle for 41 seconds, which you find measures 20 pints. You are applying 20 gallons per acre.
- The sprayer holds 100 gallons, so $100 \text{ gallons} \div 20 \text{ gal/acre} = 5$ acres can be covered with each tank.
- 2 pints per acre 2,4-D x 5 acres = 10 pints 2,4-D needs to be added to each tank.

Disclaimer

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