

Calibrating Boomless Sprayers

1. **Determine overall swath width.**
2. **Use the chart** for distance to drive in the field.
3. **Set throttle for spraying and operate equipment.** Note seconds required to drive measured distance.
4. **Keep the sprayer going and get off the tractor.**
5. **Catch spray for the noted time in Step 3 at the same RPMs and pressure.** Use a container marked in pints (a calibrated bottle or measuring cup). Catch spray from one nozzle during noted time.
6. **Nozzle output in pints equals gallons per acre actually applied.**
7. **Divide the capacity of your tank by the gallons applied per acre as determined in Step 6 to find the number of acres you can treat per tank of spray.**
8. **To determine how much chemical to add to the tank, multiply the rate per acre recommended by the number of acres your tank will cover as determined in Step 7.**

| Swath Width (Feet) | Distance (Feet) |
|-----------------------|--------------------|
| 25 | 218 |
| 30 | 182 |
| 35 | 156 |
| 40 | 136 |
| 45 | 121 |
| 50 | 109 |

If the swath width on your boomless sprayer is different than the options shown, divide 5460 (1/8 of an acre = 5460 square feet) by your swath width in feet.

Desired spray volume for most chemicals is 15-20 gallons per acre (10 GPA for glyphosate); Try to keep your pressure below 40 psi. Boomless sprayers are at higher risk for spray drift.

Useful Formula for Choosing Nozzles for Broadcast Sprayers

$$\text{GPM} = \frac{\text{GPA} \times \text{mph} \times \text{W}}{5940}$$

GPM = Gallons Per Minute
GPA = Gallons Per Acre Spray Volume
MPH = Miles Per Hour Speed
W = Nozzle Spacing Width

UNIVERSITY OF MISSOURI
 Extension

For more information contact your local University of Missouri Extension Center