

Calibrating A Boomless Sprayer

Items needed:

Measuring Wheel or Tape

Something to measure water in ounces

Flags or cones to mark corners of area to be sprayed.

Procedure:

- 1) First measure an area to be sprayed (example 50 feet wide by 100 feet long = 5000 square feet)
- 2) Fill up the herbicide tank with water.
- 3) Take the sprayer across the area marked and determine the ground speed that will be used. Once the correct ground speed is determined, make a note of the gear being used and the RPM of the motor.
Everything is based on your ability to maintain a known speed for the entire application time.
- 4) Then spray the marked area at the pre-determined ground speed
- 5) Measures the amount of water it takes to refill the herbicide tank (example 252 ounces).

Calculation:

Step 1) The known area in square feet will be divided by the number of square feet in an acre (43,560 square ft).

$$5000 \text{ divided by } 43560 = 0.1147842 \text{ acre}$$

Step 2) Next divide the ounces of water that it took to refill the herbicide tank by the portion of an acre sprayed

$$252 \text{ divided by } 0.1147842 = 2195.42 \text{ ounces}$$

Step 3) To determine how many gallons of solution is being applied per acre, divide the ounces per acre determined in step 2 by the number of ounces in a gallon (128).

$$2195.42 \text{ divided by } 128 = 17.15 \text{ gallons per acre}$$

Step 4) To determine how much herbicide to add to a tank of water (example 25 gallons), divide the gallons of water in the tank by the answer obtained in step 3.

$$25 \text{ divided by } 17.15 = 1.458$$

The 1.458 in this example is then multiplied time the desired herbicide rate (example 24 ounces)

$$1.458 \text{ multiplied by } 24 = 35 \text{ ounces}$$

Review: So to apply 24 ounces per acre of a herbicide using the sprayer calibrated in this example you would need to pour 35 ounces of the herbicide into the 25 gallons of water and then apply at the ground speed already determined.